

10-23

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Yellowstone NATIONAL PARK

FILE No.

August Monthly Report-----1921.

MONTHLY REPORT.

192__

TABLE OF CONTENTS.

	<u>Page</u>
I. GENERAL CONDITIONS, -----	1
II. PERSONNEL, -----	3
III. WORK COMPLETED, -----	8
IV. WORK IN PROGRESS, -----	9
V. WORK BEGUN, -----	18
VI. PLANS OR PROPOSED WORK, -----	18
VII. POLICIES, -----	19
VIII. COST OF OPERATION, -----	19
IX. OTHER MATTERS OF INTEREST, -----	19
Wild Animals, -----	19
Birds, -----	23
Fishes, -----	20
Seasonal Changes, -----	22
Arrests and Violations of Law, -----	23
Forest Fires, -----	24
Accidents and Casualties, -----	25
Medical Services, -----	27
Natural Phenomena, -----	28
Special Visitors, -----	28
Motion Pictures, -----	36
Miscellaneous, -----	36
X. RECEIPTS AND REMITTANCES, -----	38

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

September 10, 1921.

Dear Sir:

The following is my report on conditions in the Yellowstone National Park, and on the operation of the Park, for the month of August, 1921:

GENERAL CONDITIONS:

The temperature and rainfall were about normal, and the weather conditions ideal for travel and sight-seeing during the month of August. The roads were in splendid shape throughout the month, with no muddy stretches and no detours necessary. As usual, they were in so much better shape than were any of the approaches, that they caused much comment favorable to the park, from private motorists.

Weather.

Enclosed is the monthly meteorological report furnished by the local office of the United States Weather Bureau. The general conditions are summed up in the following notes, also furnished by the Weather Bureau, and indicate a mild, normal condition of weather throughout the month, with rains so well distributed as to serve to keep the roads in good condition rather than to make them muddy and unpleasant.

Temperature: Monthly mean, 60.2°. Moderate temperature prevailed generally during the month, the highest being 82° on the 30th and the lowest 38° on the 5th.

Precipitation: Total 1.03 inches. Departure plus 0.01 inch. Light showers occurred on 11 days. There were fewer and less severe thunderstorms than for the average August.

Snowfall: None.

Wind: Total movement about normal. Maximum velocity was 32 miles from the south on the 17th.

Sunshine: Percentage of possible, 71. Normal 71.

Travel.

*Sept 3 + 4
and 11 - 12*

The usual schedules meeting all passenger trains at the three railroad terminals, Gardiner, West Yellowstone, and Cody, and furnishing daily transportation between all of the main points of interest in the park, were maintained without interruption every day during the month by the Yellowstone Park Transportation Company. This Company also furnished transportation to Jackson Lake on a thrice-a-week schedule and oftener when there was demand, and for other side trips as required by travelers.

Enclosed is the Chief Ranger's Travel Report for August, 1921, together with copy of similar report for 1920 for comparison.

An interesting comparison of facts relating to travel for the two years will also be found in the following tables, prepared in the Chief Ranger's Office. Please note that a part of the gains for the months of June and July of this year over last were lost in August, but that our total travel at the end of August was still about $3\frac{1}{2}\%$ ahead, also that the loss was all rail travel, the August private motor travel showing a gain.

Labor and Supply Market.

Regardless of the constant reports of hard times, at no time during August was there any surplus of men looking for work in the park, and at the present time we have lost quite a number of men from our maintenance crews and in several instances have not been able to replace them. The usual spirit of unrest and desire to be on the move incident to the close of the season is apparent.

Supplies are plentiful, and prices about the same as last month.

II. PERSONNEL:

Employees.

On August 1st, there were 408 employees on duty under this office, which had been decreased by August 31st to 331.

The following list shows the number of employees of various classes serving under appointment during the month, with a statement in general of the kind of work in which they were engaged:

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
2	Asst. Engineers	In charge of engineering work in the park. (1 H.P.S., At Large).
1	Surveyor	Surveying for new construction work at Dunraven Pass, also at Canyon Camp.
7	Clerks	1 Disbursing Agent and Purchasing Clerk; 1 on cost account work and property; 1 on time keeping; 1 on orders, proposals, and vouchers; 2 stenographer-typists on stenographic work, files, etc., 1 on cutting and pasting clippings.
2	Electricians	Read meters, did necessary line work, and operated power plant regular shifts, including Sundays.
4	Foremen	1 in charge of stables at headquarters; 1 in charge of road sprinkling; 2 on road maintenance.
1	Telegraph Operator	Sent and received all Government Western Union messages; operated one shift on telephone switchboard.
2	Telephone Switchboard Operators	Operated telephone switchboard, daily shifts, including Sundays. (1 on intermittent service only).

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1	Master Mechanic	In charge of shops, and of repairs to heavy road machinery.
1	Blacksmith	General blacksmith work, including shoeing horses in shop, overhauling and repairing tools, and equipment.
1	Master Painter	General shop work, including repairs to equipment and buildings at headquarters, also painting and placing of road signs.
1	Chief Lineman	In charge of power plant, telephone lines, and of maintenance crews on telephone lines.
3	Laborers	Teaming, freighting, and miscellaneous work at headquarters. (1 resigned at close of Aug. 20th).
1	Handyman	Worked in storehouse issuing and receiving supplies.
1	Steward and Master of Transportation	In charge of all transportation and of storehouses. (Furloughed at close of August 16th).
1	Buffalo Keeper	In charge of tame buffalo herd.
2	Asst. Buffalo Keepers	1 assisting Buffalo Keeper; 1 in charge of hay raising operations at Slough Creek.
1	Buffalo Herder	Assisted Buffalo Keeper.
1	Park Naturalist	Scientific research work and developing museum.
1	Master Plumber	In charge of general plumbing, and of installation of water systems at public automobile camps.
2	Automobile Mechanics	Repairing motor trucks and touring cars.
1	Watchman	Made hourly patrols during night at headquarters, took care of office, and in charge of watering of lawns at night.

<u>No.</u>	<u>Class</u>	<u>Kind of work performed.</u>
1	Carpenter	Repaired buildings at headquarters.
1	Chief Ranger	In charge of ranger force.
1	1st Asst. Chief Park Ranger	In charge of northern district and of trail crews.
2	Asst. Chief Park Rangers	1 in charge of southern district; 1 in charge of western district.
22	Park Rangers	In charge of ranger stations; directing traffic; motorcycle patrols; on duty in Chief Ranger's Office.
40	Temporary Park Rangers	On duty in Chief Ranger's office, making patrols, directing traffic, also Information and Guide Service. (3 discontinued during month).

In addition to the regular employees listed above under appointment, the following were employed temporarily by the day:

	<u>On Aug. 1st</u>	<u>On Aug. 31st</u>
Foreman,	4	3
Mechanics,	10	11
Carpenters,	1	1
Painters,	2	2
Linemen,	1	1
Plumbers,	1	1
Stone Mason,	1	1
Blacksmith,	1	1
Steam Shovel Operator,	1	1
Waitress,	1	0
Cooks,	28	24
4-Horse Teamsters,	51	24
2-Horse Teamsters,	43	29
Skilled Laborers,	107	77
Laborers,	70	54
	502	230
Appointments,	106	101
	408	331

Leaves of Absence.

During August, annual leaves of absence were granted as follows:

W.H. Riley,	Automobile Mechanic,	1 day - Aug. 10
B.L. Stinnett,	Master Mechanic,	2 " - Aug. 8-9
W.J. O'Loughlin,	Watchman,	2 " - Aug. 11-12
Russell Sprinkel,	Park Ranger,	5 " - Aug. 7-12
Russell Sprinkel,	do	5 " - Aug. 13-17*

*Sick leave to be applied for.

W.H. Riley,	Automobile Mechanic,	1 " - Aug. 20
W.L. Bicket,	Carpenter,	2 " - Aug. 22-23
W.H. Riley,	Automobile Mechanic,	1 " - Aug. 28-29
Albert Collins,	Electrician,	2 " - Aug. 30-31
Carrie Haunesser,	Stenog.-Typist,	2 " - Aug. 30-31

Separations.

John Delmar, Steward and Master of Transportation, \$1680 p.a., furloughed indefinitely at close of August 16th.
Belknap C. Hawkes, Temporary Park Ranger, \$80 per mo., discontinued at close of August 25th.
Pierce A. Cunnings, Temporary Park Ranger, \$80 per mo., discontinued at close of August 22nd.
William H. Harrison, Park Ranger, WAB, \$1200 p.a., furloughed indefinitely at close of August 18th.
Edward Pyle, Laborer, \$1080 p.a., resigned, effective at close of August 20th.

Appointments.

Appointments were received during the month, effective July 1st, as follows:

Burton C. Lacombe, Chief Buffalo Keeper, \$1500 p.a. and quarters, by promotion from Buffalo Keeper, at \$1320 p.a. and quarters.
Eri A. Allan, Chief Lineman, \$1500 p.a. and quarters, by promotion from Lineman, at \$1320 p.a. and quarters.
William Wiggins, Master Plumber, \$1500 p.a. and quarters, by promotion from Plumber at \$1320 p.a. and quarters.
Bert L. Stinnett, Master Mechanic, \$1850 p.a. and quarters, by promotion from Master Mechanic at \$1800 p.a. and quarters.
August C. Neumann, Master Painter, \$1500 p.a. and quarters, by promotion from Painter at \$1320 p.a. and quarters.
James McBride, Chief Park Ranger, \$1620 p.a. and quarters, by promotion from Chief Ranger at \$1500 p.a. and quarters.
Harry Trischman, 1st Asst. Park Ranger, \$1500 p.a. and quarters, by promotion from \$1440 p.a. and quarters.
Joseph Douglas, Assistant Chief Park Ranger, \$1440 p.a. and quarters, by promotion from \$1320 p.a. and quarters.

Eivind T. Scoven, Asst. Chief Park Ranger, \$1320 p.a. and quarters, by promotion from Park Ranger, at \$1200 p.a. and quarters.

Wendell M. Bishop, Park Ranger, \$1320 p.a. and quarters, by promotion from \$1200 p.a. and quarters.

Raymond G. Little, Park Ranger, \$1320 p.a. and quarters, by promotion from \$1200 p.a. and quarters.

Roby Roy Wisdom, Park Ranger, \$1320 p.a. and quarters, by promotion from \$1200 p.a. and quarters.

George Winn, Park Ranger, \$1320 p.a. and quarters, by promotion from \$1200 p.a. and quarters.

- - - - -

Mr. George E. Goodwin, Chief Civil Engineer, National Park Service, visited the park overnight August 11th to 12th, and with me reviewed the estimates for the National Parks which had been compiled here.

Mr. B.L. Vipond, Chief Clerk of your office, arrived in the park on August 8th, via Gardiner, and remained until August 14th, assisting with the annual estimates.

Miss Mae Schmurr, of your office, was on duty in the park during the month, assisting with the preparation of the estimates for the several national parks.

Landscape Engineer D.R. Hull, National Park Service, was in the park on duty throughout the month, except August 22nd to 29th inclusive, when he visited Glacier Park officially. Mr. Hull's work in Yellowstone during the month was principally in connection with the construction of new ranger stations and community centers at Upper Basin and Lake, the lookout station on Mount Washburn, which was completed during the month, and the new checking station at the Gardiner entrance, which is now in process of construction. He was also called upon frequently to pass upon improvements being made or contemplated by the public utilities in the park. Mr. Hull left the park for his regular permanent station in Yosemite Park on September 2nd, via West Yellowstone.

III. WORK COMPLETED:

(a) Construction of Physical Improvements.

A second new public automobile camp, known as Camp No. 2, was constructed at Lake Outlet near the Fishing Bridge. The water supply for this camp consists of a concrete tank, with capacity of a thousand gallons, supplied by a large spring. This water is conducted from the tank to the camp, for 4000 feet, through 2 inch galvanized iron pipe, and for 2,000 feet through 1½ inch pipe, and is distributed throughout the camp by 1600 feet of ¾ inch pipe, which feeds eighteen faucets, which are scattered at convenient intervals throughout the camp.

It also became necessary to construct an additional automobile camp at park headquarters, across the road from the main camp. Pure water was carried to this camp from our mains for a distance of 2,000 feet through ¾ inch galvanized iron pipe. Five faucets were installed in the camp. Toilet facilities and dry wood were also provided for both of these camps.

At the Buffalo Farm, a log building 17 x 19 feet in size, was constructed for use as a blacksmith shop and store house. The peeled logs, shingles for roof, three windows, and one door, were already on hand. The building was finished on August 31st and cost approximately \$175.00.

(b) Maintenance and Repair of Physical Improvements.

Work under this heading is reported under IV - Work in Progress.

(d) Service to the Public.

The Information Office at headquarters was kept open daily, including Sundays, from 7:30 A.M. to 10:00 P.M., with one attendant constantly on duty. A total of 10,820 visitors were recorded during the month. 5,150 Park Rules and Regulations were distributed, of which 4,943 were given out at the Information Office. In addition, approximately 1250 pamphlets of other parks and other free literature were distributed from the Information Office during the month. A total of 1,081 sale pamphlets, maps, and books, were sold during the month, the total value amounting to \$245.85. 63 Haynes' Guide Books were sold at 75¢ and 94 Truthful Lies, at 25¢, and the money turned over to the publishers.

Free guide service was maintained from hotels and camps at Mammoth Hot Springs and at Upper Geyser Basin throughout the month. At Mammoth Hot Springs, 59 trips were made from the Mammoth Hotel, with a total of 1,524 people, and 60 trips from Mammoth Camp, with a total of 1,990 people, making a total of 119 trips, with 3,514 people. At Upper Geyser Basin, two guides made two trips per day each and conducted a total of 3,503 tourists from Old Faithful Inn over the geyser formations, and a total of 5,365 tourists from Old Faithful Camp.

Park Ranger Mary A. Rolfe delivered a total of 84 lectures at headquarters during the month. Of these, 30 were given at Mammoth Hotel; 27 at Mammoth Camp, and 27 at the public automobile camp.

One park ranger was on duty with the tame buffalo herd, holding them from 10:00 A.M. till 5:00 P.M. daily at a point near the fence where they could be found by tourists. It is estimated that 18,000 tourists visited this herd during the month.

The usual excellent service was given to the public by the Hotels, Camps, Transportation Company, and all public utilities, and complaints received during the month were marvelously few when the heavy travel is taken into consideration.

The Yellowstone Park Forest and Trail Camp, which is maintained near Camp Roosevelt, was discontinued on August 20th, and its Director, Professor Alvin G. Whitney, of Syracuse University, left the park soon afterwards for his permanent home at Syracuse, New York.

IV. WORK IN PROGRESS:

(a) Construction of Physical Improvements.

The work on the stone building on top of Mount Washburn, which is to be used as a shelter and fire lookout station, ended on August 18th, and this building is practically completed, lacking only a few seats. This building is 16 feet square inside, with stone walls 2 feet thick, laid in cement mortar. The lower story is 8 feet 6 inches high inside. The fire tower, which is also constructed of stone, is 7 feet 6 inches by 7 feet 10 inches inside dimensions; height 8 feet 18 inches. In connection with this lookout station, 2 comfort stations, 7' x 16', were also provided. These are also of masonry construction throughout, with walls 16" thick. The parapet wall is also extended along the approach to the top of Mount Washburn for 60 feet.

Norris Bridge: Good progress was made during the month on the construction of the new concrete bridge over the Gibbon River at Norris Junction. The floor slab was poured on August 30th, and there now remains only the railings to complete the job. Foreman White has charge of the work.

Sheet piling was driven to form a coffer dam around the abutments, but due to the gravel formation in the river bed, considerable trouble was experienced keeping the water out. At first a three inch rotary pump was used, but proved to be too small. A six inch centrifugal pump was then secured, which proved to be very satisfactory. Power was furnished by a steam roller.

Footings for the abutments were carried down to a point about one and one-half feet below the bottom of the river at the deepest point in the center of the stream.

A diligent search made in the vicinity of the bridge site failed to reveal any gravel suitable to make concrete for the floor slab. A good grade of sand and fine gravel was secured in the river bed near the ranger station for the abutments and railings. In order to secure the desired strength in the floor slab, it was thought advisable to obtain the gravel from the pit on Capital Hill at Mammoth. Twenty-four cubic yards of gravel, ranging in size from three-quarters to two and one-half inches, was hand screened, then hauled to the bridge site in trucks.

The bridge has a span of 30 feet. Five steel I beams, encased in concrete, support the load. The floor slab is reinforced with corrugated steel bars and expanded metal.

The bridge and abutments when completed will contain eighty cubic yards of concrete and 4528 pounds of reinforcing steel exclusive of the five I beams.

Canyon Retaining Wall: Good progress was made on this work during the month. 336 lineal feet were constructed with an average height of 8 feet, containing 461 perch, the rock having been quarried for this purpose. 18 small masonry piers were also constructed, supporting 256 feet of log parapet wall. In connection with this work, parking space was constructed to take care of eight cars near the Upper Falls of the Yellowstone. There were also installed 48 lineal feet of 12 inch galvanized iron culvert and 22 lineal feet of 18 inch galvanized iron culvert.

The new log ranger station on Crevice Mountain, mentioned in last report, was completed during August with the exception of a little work on the doors and windows, which is delayed until these can be procured.

The drift fence from Opal Creek to Mount Morris across Lamar Valley was completed on August 10th and cost about \$1,000.

Excellent progress was made on the two Combined Ranger Stations and Community Centers at Upper Geyser Basin and Canyon respectively, under contract by Contractor Merritt I. Tuttle. By the end of August the log walls of these buildings were practically completed and they were nearly ready for the roof.

(b) Maintenance and Repair of Physical Improvements.

East Forest Road: Foreman Wasden, with his crew of seven men and four teams, continued maintenance and repair work on the road through the East Forest Reserve. One mile of the road between the bridge over the North Fork of the Shoshone River and the Elk Fork was widened, by grading and filling, to a width sufficient to permit cars to pass.

On August 15th, a very heavy rain occurred on that section of road between Sylvan Pass and Pahaska, doing considerable damage. This crew moved to that vicinity on August 20th and began making repairs, which required the remainder of the month.

South Entrance and South Forest Roads: Foreman Osterlund, with a crew of six men and three teams, made repairs and maintained the South Entrance and South Forest Roads between Lewis Lake and Arizona Creek. Many wooden culverts were repaired, gravel hauled where needed, and the roadbed shaped and smoothed with a four-horse grader.

The crew was camped at Arizona Creek until the 6th of the month, when they moved to a point within the park, seven miles from Snake River Station. On the 23rd they moved back into the Reserve, at Dime Creek, and on the 31st went on down to Arizona Creek.

Sprinkling System: About 107 miles of road on the loop were sprinkled twice daily during the month. The equipment used was two auto truck sprinklers, two two-

horse sprinklers, and fifteen four-horse sprinklers, located as follows:

- Route 1 - Two-horse sprinkler. On duty at Mammoth Hot Springs.
- Route 2 - Auto truck sprinkler. From Gardiner to Golden Gate.
- Route 3 - Four-horse sprinkler. Swan Lake Camp to Beaver Lake.
- Route 4 - Four-horse sprinkler. Beaver Lake to Norris Station.
- Route 5 - Four-horse sprinkler. Norris Station to Gibbon Meadow.
- Route 6 - Four-horse sprinkler. Gibbon Meadow to Gibbon Falls.
- Route 7 - Four-horse sprinkler. Gibbon Falls to Madison Junction.
- Route 8 - Four-horse sprinkler. Madison Junction to 4-mile post toward West Yellowstone and from Madison Junction to Firehole Cascades.
- Route 9 - Four-horse sprinkler. Fountain Ranger Station to Excelsior Geyser.
- Route 10- Four-horse sprinkler. Excelsior Geyser to Old Faithful.
- Route 11- Two-horse sprinkler. Old Faithful Inn to bear feeding grounds.
- Route 12- Four-horse sprinkler. Old Faithful to Spring Creek.
- Route 13- Four-horse sprinkler. Spring Creek to Shoshone Point.
- Route 14- Four-horse sprinkler. West Thumb to Arnica Creek.
- Route 15- Four-horse sprinkler. Natural Bridge to Lake Hotel.
- Route 16- Four-horse sprinkler. Lake Hotel to 5-mile post on road to Canyon.
- Route 17- Four-horse sprinkler. Five mile post on road from Lake to Canyon, to Trout Creek.
- Route 18- Four-horse sprinkler. Trout Creek to Otter Creek.
- Route 19- Auto truck sprinkler. Otter Creek to Canyon, Hotel and Artist Point Road.

Foreman Ferrell, with a crew of six men and two teams, worked between the Lower Basin and Spring Creek, making repairs and maintaining the sprinkling system. Seven new round red-wood tanks, of 1600 gallons capacity, were installed, several old tanks repaired, and much new flume built. The most noticeable improvement was at Excelsior Geyser,

where a new tank was installed on the opposite side of the river and the old unsightly tank and flume on the formation removed.

The old unsightly tank and flume at the Castle Geyser was also removed and a new one built in the trees, where it is better screened from view.

West Gallatin Road: The crew of six men and three teams, working under Foreman Casey, accomplished good work repairing and maintaining this section of road. Seven miles of road were shaped, ditched and graded. Seven bridges, varying in length from eight to fourteen feet, were completely redecked with poles, also the bridge over the Gallatin River at the Ranger Station. The trusses on the bridge about one and one-half miles above the ranger station were replaced.

On August 23rd, the fund allotted for this section being exhausted, the crew was moved to a location on the West Entrance Road about five miles from the West Entrance, where they stayed the remainder of the month, making repairs by grading and hauling in new gravel to the road between Riverside Station and the Madison Bridge.

- - - - -

Two men and one team were kept at each sprinkling station to maintain the road in that locality. Their work consisted of filling the chuck holes with new gravel, installing small culverts, and providing better road drainage.

Each sprinkler team was provided with a road drag or grader, which they used to advantage after rains.

EAST ENTRANCE ROAD: Foreman Bott, with a crew of four men and two teams, maintained this road between Squaw Lake and Sylvan Pass, about 15 miles. The road was graded and gravel hauled where needed.

Foreman Cunningham, with a crew of four men and two teams, maintained the road from Tower Falls Junction to a point seven miles toward the Canyon, and from Tower Falls Junction for a distance of four miles on the Mammoth Road.

Foreman Narlow, with four men and two teams, camped at Blacktail Deer Creek and maintained the Mammoth-Tower Falls road from Lava Creek to the 4-mile post from Tower Falls Junction.

Foreman Roberts, with four men and two teams, maintained the road between Canyon Junction and Norris Junction.

Dunraven Pass: The crew working on Dunraven Pass made excellent progress during the month. The steam shovel ran continuously for twenty-eight days, moving 6,200 cubic yards of material, of which 60% was solid rock. This crew also placed 116 lineal feet of galvanized iron corrugated 18 inch culvert; constructed 155 lineal feet of dry retaining wall with an average thickness of 24 inches; and completed the construction of 24 lineal feet of reinforced concrete culvert, 2'6" x 4'.

24 lineal feet of galvanized iron corrugated culvert was placed on the Norris cut-off road.

(c) Miscellaneous Improvement Work.

The painting force continued the work of painting the frame quarters at park headquarters. Three of the double sets of quarters were completed during the month and a start was made on the fourth set. The color of these buildings is being changed to a light green roof, with light grey body, and terra cotta chimneys, which harmonizes much better with the surroundings than did the old colors with a dark red roof.

The painters also completed about 100 road signs and placed them in position in the park.

In addition to the construction work at the automobile camps, the plumbers did general repair and maintenance work to our extensive water and sewer systems at park headquarters.

It required the services of several men at Mammoth, Upper Basin, Lake, and Canyon, to keep the public automobile camps clean and provide wood for the large number of campers. Two new toilets were provided at Mammoth; two at Tower Falls; and two at Canyon, during the month.

and house shed
Carpenter Shop: The two carpenters were busy during the month repairing quarters before the painters began work on them; setting up toilets at the automobile camps; finishing new bunk house; making window frames for the new checking station at Gardiner, and miscellaneous repairs to buildings at headquarters.

Sept 1
Smoothing Operations began
Fences around - 14 - shrubbery

Blacksmith Shop: During the month of August one man devoted his entire time to fitting shoes and shoeing horses at the different road crews and ranger stations in the park. The other two men worked on irons for the Mount Washburn Lookout Station and the new Combined Ranger Stations and Community Centers, also repairing steam shovel, wagons, graders, and motor vehicles; making concrete forms for the Morris bridge, etc.

Garage: The men at the garage spent the month repairing motor trucks, passenger cars, and motorcycles. They also issued and received gasoline and oil.

During the month of August repairs to the telephone line were completed between Lake Station and Sylvan Pass Ranger Station, also between Thumb Station and Snake River Station, and between Lake Station and Thumb Station. Light repairs were made to line, and about 3/8 mile moved and rebuilt to Lake line from the formation.

A metallic line was placed in service from Mammoth to Norris on both park lines, going through repeating coils at Norris and tying on to the grounded lines at that point. This has made the lines talk up much clearer than before; has done away with the cross talk between the two lines, permitting conversation to be carried on over the two lines at the same time. In fact, this has practically doubled our service in the park, as formerly it was possible to use only one line at a time on account of the cross talk.

Several poles have been reset and the guys on some of the heavy corners strengthened. Work has also been started on the power line at Mammoth, which consists of resetting of some of the poles and putting on guys.

The power plant was run twenty-four hours daily, including Sundays. The total current generated during the month was 22,430 kilowatt hours. Of this production, 8,261 kilowatt hours of current were sold to public utilities operating at Mammoth Hot Springs for lighting and power purposes, 1280 kilowatt hours for lighting streets, and the balance, 12,879 kilowatt hours, were used for lighting Government buildings and furnishing power to our shops. The peak load of 64 kilowatt hours occurred at 8:00 P.M., August 26th.

Park Naturalist Skinner prepared the usual set of monthly notes on flowers, geology, animals, and birds, of which 46 sets were posted on bulletin boards and 3,388

sets were given out from the Information Office. 234 geological specimens were collected for the Museum. 35 lectures were given on "Tower Falls", "Whitebar", "Fossil Forests", "The Canyon", "Yellowstone National Park", "History of Yellowstone National Park", "Animals", and miscellaneous subjects. Data on natural features were collected daily. Inspections of forests were made and the findings reported. Other studies made by him resulted in reports on Seasonal Changes and Natural Phenomena, as embodied in this report. Eighteen days were devoted to special work assigned by the Superintendent. Four fires were put out by him during the month.

*All report
concluded
and stated*

The office force was exceedingly busy throughout the month and obliged to work overtime nearly every day. In addition to the vast amount of current work, the preparation of the annual estimates for Yellowstone Park, as well as the other parks, added to the duties. A total of 1,157 official letters were received during the month and 1,330 official letters were sent out.

Haying Operations: The field at Gardiner, near the north entrance, was irrigated once during the month following the putting up of the hay in July. The hay was measured after having been stacked for thirty days and found to contain 148.2 tons. This field has grown up again and there will be a fine crop of feed on the stalk for winter use of the antelope.

The crew at Yancey's completed the stacking of hay at that point during the month. These stacks were measured and found to contain 96 tons. There is considerable old hay from last year left in stack at this point, the total of both crops being estimated at about 150 tons on hand there.

The crew working at the Buffalo Ranch, mentioned in my last report, finished its work on August 12th, having cut an estimated amount of 240 tons.

Another small crew was sent out during August to cut a field of timothy located on Lamar River on the opposite side from the main ranch, and this work was completed on August 29th. The estimated amount on this field is 150 tons. There are about 250 tons of old hay left in stack at the Buffalo Ranch, making a total available at this point for the coming winter of about 640 tons.

The haying operations at the two ranches on Slough Creek were completed during the month. These stacks have not as yet been measured, but are estimated at approximately 500 tons.

Summary: The total estimated amount of hay available for next winter's use at the Buffalo Ranch and for wild animals, is, therefore, Gardiner, 148 tons; Yancey, 150 tons; Buffalo Ranch, 640 tons; Slough Creek, 500 tons; total, 1,438 tons.

Arrangements were made to make improvements to the South Road between the Buffalo Fork Bridge and Twogrootee Pass under our allotment of \$2,000 for this purpose, and this work was begun, but due to the distance and lack of communication, definite reports of progress are not available at this time.

Sanitation: Mr. A.P. Miller, Junior Assistant Sanitary Engineer, U.S. Public Health Service, continued his work in the park during the month. He, however, suffered an injury in an automobile accident on August 11th and was confined to his bed until the latter part of the month. His work was, therefore, somewhat delayed. The work covered by him during the month consisted of completion of survey for sewer and disposal systems at Upper Geyser Basin; location of positions for disposal systems at Canyon Camp, Gardiner Checking Station, and Canyon Ranger Station; design of septic tank for Gardiner Checking Station; location of position for sewerage disposal at the Lake Camp; design for sedimentation tank for Canyon Camp, and usual water analyses.

Trails and Snowshoe Cabins: The crew working under Park Ranger Henry Anderson completed the new snowshoe cabin on Fox Creek. This cabin is built of logs, with a rubberoid roof, supplied with necessary doors and windows, and is a very substantial and comfortable cabin. This crew then cut a trail from Fox Creek to Mariposa Lake, then proceeded to Lynx Creek, clearing out the trail en route, and replacing the old corduroy with new. They also built a new trail up Mountain Creek through Eagle Pass, and down Eagle Creek--in all about 30 miles.

They then proceeded to Cabin Creek and gave the snowshoe cabin there a thorough overhauling. The old roof was taken off; side walls raised 16 inches, and a new roof of poles, covered with rubberoid, was placed on the cabin. It was also supplied with a new floor, and the logs were reshinked.

The crew was dissolved on September 3rd. Several of the men were transferred to other crews, and Ranger

Anderson, with the pack train and two men to assist him, remained in the vicinity of the southeast corner to pack in the supplies for the winter stations and the snowshoe cabins of that district.

A new foot trail was built from the Lower Falls of the Yellowstone along the west side of the Grand Canyon as far down as Inspiration Point. This is a very scenic trail, taking in every vantage point along the Canyon.

Improvements by Park Utilities.

Down 50X51
The Yellowstone Park Hotel Company completed the construction of the men's dormitory at the Canyon. ✓

ancient Hall Basin
The Yellowstone Park Camps Company began the construction of a sewer line and sedimentation tank designed for the Canyon Camp by Sanitary Engineer Miller, of the U.S. Public Health Service. ✓

Mr. C.A. Hamilton continued work on his improvements at Upper Basin and Lake Outlet.

V. WORK BEGUN:

Work was begun about the middle of August on a stone building, located near the entrance arch at Gardiner, for use as a checking station, under plans approved April 18, 1921.

VI. PLANS OR PROPOSED WORK:

Plans for September contemplate the continuation of work in progress noted in previous sections.

At the Buffalo Ranch it is contemplated fencing the hay stacks; rounding up the herd of tame buffalo, and making general preparations for the winter months. Plans also contemplate discing the 200 acre meadow, which has been seeded for several years and has become sod-bound. This work will cost in the neighborhood of \$500.00.

During September summer stations will be abandoned and all the year round stations placed upon a winter basis. Temporary rangers will be laid off during the month, and crews working on roads and other improvements will be brought in and laid off. A total of 15 ranger stations and 21 snowshoe cabins will be supplied with rations, etc., for the winter.

Contract has been let for cutting 150 cords of wood for our winter supply at headquarters. This will be cut from dead timber about seventeen miles south of head-

quarters on the Morris road and brought in on trucks hauling to winterstations and otherwise coming in empty.

Our plans for September also contemplate getting in our winter supplies, including coal, oats for horses, etc., and involve considerable trucking expense.

School
VII. POLICIES:

There was no change in policies during the month.

VIII. COST OF OPERATION:

This will be furnished from the regular monthly cost report for August as soon as it can be compiled. Interesting data secured in connection with the keeping of cost accounts show that during July about 22,000 meals were served at the various camps at an average cost, including supplies, cooking expense, freighting expense, etc., of about 30³/₄¢ per meal; also that trucking from headquarters to points in the park averaged 21¹/₂¢ per ton mile, also that the average cost of foraging horses during the month was about 27¢ per meal.

IX. OTHER MATTERS OF INTEREST:

Wild Animals.

Buffalo, tame herd: The main herd ranged on Mount Morris behind the new drift fence. Four special parties visited the Buffalo Farm during the month for the purpose of viewing this herd and were given special attention. The show herd, consisting of 19 bulls detached from the main herd, was kept at Mammoth Hot Springs in the pasture where they could be viewed by visitors.

Buffalo, wild herd: Dr. David C. Hilton, of Lincoln, Nebraska, and party, traveling with saddle and pack outfit through the summer range of the wild buffalo herd, reported having seen 49 wild buffalo and 9 calves.

Antelope: Evidence was found of the presence of 113 adult antelope and 82 kids on the Blacktail range. This is a fine showing and indicates a goodly increase in the herd.

Moose: Ranger Lichtenwallner, who was stationed during the summer in the Upper Yellowstone district, re-

ported having seen 107 moose during the month of August, and that there was a good crop of calves with them.

Bears: Bears were present at the garbage piles in about the usual numbers and attracted much attention. No complaints were filed of their depredations. In a few cases rumors were heard of people having been slightly scratched or injured by "tame" bears, but the injuries were not serious enough so that they were reported officially.

Further notes on mountain sheep, elk, deer, beaver, etc., will be found in September Notes on Animals, by Park Naturalist Skinner, appended to this report.

Grazing: There was excellent grazing for our animals throughout the park.

Stray Stock: A stray black horse, impounded by Park Ranger Larsen on July 8th, was claimed and properly identified by the operators of the Swan Lake Flat Dairy Herd.

A three-year old steer, impounded by Buffalo Keeper Lacombe, was claimed by a ranger east of the park, who was able to properly identify the animal. The steer is being held at the Buffalo Farm pending its sale by the owner.

Fishes.

Fly fishing was good in streams beyond the reach of the throngs of motorists. The management at Camp Roosevelt made a specialty of sending out fishing parties, and the guides at that camp were uniformly successful in securing excellent fishing for their tourists.

The representatives of the United States Bureau of Fisheries, who run the hatchery on Yellowstone Lake, completed their season's work and left the park on August 30th. A full report of the season's operations has been requested, and will be furnished later.

Plants of Fish in the Park: As a result of my contention that it is necessary to plant more fish in the park to take care of the demands due to increased travel, practically all of the fish that were on hand at the hatchery at the end of July were reserved for the park and were planted during August. The work was all done by our own trucks and rangers, except the planting in the

5th herd HCC to
Don White as ch
for out to Yell
18th
Canyon head OE
Kegan out Mammoth
noon 20th

small streams adjoining Yellowstone Lake, which was done from boats by the Fish Commission. Plants of blackspotted trout were made as follows:

(By our Trucks)	
Aug. 10 - Jones Creek (Eyed Eggs),	52,000
Aug. 10 - Cache Creek (Eyed Eggs),	<u>132,000</u>
Total Eyed Eggs,	184,000
(Fry)	
Aug. 16 - Soda Butte Creek,	67,200
Aug. 21 - Tower Creek,	42,000
Aug. 21 - Antelope Creek,	117,600
Aug. 18-30 - Lamar River-in small tributaries,	449,000
Aug. 23-24 - Slough Creek, upper,	105,400
Aug. 20-25 - Slough Creek, lower,	212,300
Aug. 27 - Fish Lake, near Soda Butte, to replace eggs taken by Fish Commission early in season,	<u>155,400</u>
Total planted by National Park Service,	1,334,400

Planted by Fish Commission in small streams adjacent to Yellowstone Lake, from boats:

Flat Mountain Arm,	98,200
Stevenson Island,	25,200
Grouse Creek,	141,000
Chipmunk Creek,	157,000
Pelican Creek,	100,000
Bridge Creek,	50,000
Clear Creek,	230,000
Cub Creek,	237,200
Columbine Creek,	110,000
Bridge Bay,	50,000
Hatchery Creek and vicinity,	100,000
Thumb,	28,000
Arnica Creek,	<u>10,000</u>
	1,336,600

Taken from Lake Hatchery and planted by Wyoming State Officials in streams of Teton National Forest adjoining the park,

200,000

Total distributed from Park Hatchery, 2,871,000

The Montana State Hatchery, of Emigrant, Montana, donated 18,000 large fingerlings of the blackspotted variety, which were planted on Aug. 19th as follows:

In Blacktail Deer Creek,	12,600
In Lava Creek,	<u>5,400</u>
	<u>18,000</u>

Total plants of Blackspotted Trout during August, 2,889,000

The work of planting was handicapped to a considerable extent by lack of a sufficient number of suitable cans for transporting the fish. The Fish Commission had sent out most of their supply of cans on the road, and needed those they had kept at the Lake for planting the fish in that vicinity by boat. We wired the hatchery at Bozeman, but found most of the cans belonging there were out on the road with the fish car, being used in planting in various parts of the state. We were finally successful in borrowing twenty cans from the Montana State Hatchery, at Emigrant, Montana, and managed to get along with these and a few we had on hand.

As a rule, most of the fish planted were transported successfully, and with but little percentage of loss, but a large percentage of two small loads were dead when they reached the streams, due to use of improper containers for transporting them.

Much valuable assistance and advice relative to proper methods of handling and planting fish fry was received from Doctor Charles C. Adams, Director of the Roosevelt Wild Life Forest Experiment Station, of New York, who accompanied the rangers on two of their trips with fish fry, and by Dr. Richard A. Muttkowski, of the University of Idaho, who spent most of the summer at Camp Roosevelt in connection with scientific research work.

Seasonal Changes.

Seasonal changes are indicated by the following natural conditions:

Botanical:

While most of our summer and autumn flowers were in bloom throughout the park at the beginning of the month, the number and variety steadily declined, until at the end only Sunflowers, Asters, and Rabbit Bush were blooming below 6,000 feet; Rocky Mountain Bee Plants at Mammoth, and a few Fireweed, Geraniums, Cinquefoil, Lupines, Harebells, Goldenrod, Purple Asters, Yarrow, Wild Parsley, Fringed Gentians, and Snapdragons on the Park plateau. Stone Crop was the only flower remaining above timberline.

Huckleberries have been extremely abundant. Kinni-kinick berries were red and ripe on the 26th. Geraniums and dog-bane began changing color about the 20th and aspens on the 27th.

Birds:

Migratory birds were first seen: Willet on the 12th; Solitary Sandpiper on the 21st; Pintail Duck on the 26th; and Gadwalls on the 28th. Bluebirds began flocking and moving south on the 12th and continued until the end of the month. Nighthawks left during the middle of the month. The increased number of wild fowl became noticeable about the 15th. Pink-sided Juncos began flocking on the 18th and the movement south was very marked by the 31st. Cliff swallows began leaving on the 21st and continued to go until the end.

Animals:

Pine squirrels were seen hoarding fir cones as early as the 12th. At the end of the month; the Whitetail Deer were still in the red coat, but the Mule Deer had just begun to change to the winter gray; a few Woodchucks and Ground Squirrels were still to be found.

According to this data, the autumn is beginning eight days earlier than the average season.

PATROLS.

Constant and most effective patrols were maintained by the ranger force during the month. These patrols included many miles on horseback on trails for the purpose of detecting forest fires, also daily patrols over all the roads of the park by motorcycle riders, and other daily patrols on foot, protecting the formations at Mammoth Hot Springs, Norris Basin, Lower and Upper Geyser Basins. The four men engaged in patrolling the roads by motorcycle traveled an aggregate distance during the month of approximately 12,000 miles.

Arrests and Violations of Law.

The following table is a list of arrests made, and the punishment in each case, for violations of law during the month;

<u>Date</u>	<u>Name</u>	<u>Cause</u>	<u>Punishment</u>	<u>Arresting Ranger</u>
Aug.				
1	E.S. Gardenhire	Leaving fire and dirty camp,	\$25.60	T. Cogswell.
5	E.P. White,	Speeding,	\$25 & costs	H. Matthew.
6	C.F. Pantte,	Leaving camp fire,	\$20.60	Ed. Burkett.
12	Abraham Miller,	Defacing formation,	\$10 & costs	E. Robertson.
13	Frank J. White	Selling intoxicating liquor,	\$150 & costs,	P. Cummings.

<u>Date</u>	<u>Name</u>	<u>Cause</u>	<u>Punishment</u>	<u>Arresting Ranger</u>
Aug.				
13	Thomas Dwyer,	Violation of Volstead	\$150 & costs,	P. Cummings.
13	Otto J. Breil,	do Act,	\$100 & costs,	do
13	E.J. Wells,	do	\$100 & costs	do
13	W.H. Gruenhagen,	do	\$100 & costs,	do
18	Josephine Mattson,	Defacing Formation,	\$15 & costs	E. Matthew.
19	Chas. F. Marchison,	Leaving Camp Fire,	\$10 & costs	E.D. Glynn.
20	Lowell W. Ridges,	Speeding,	\$25 & costs	do
29	James W. Sullivan,	"	\$25 & costs	E. Matthew
30	Ed. W. Fidler,	"	\$15 & costs	do
2	Dr. Bennett,	Speeding	Reprimanded,	G.S. Ferguson &
				C.L. Butler.
11	Harry Thompson,	"	"	Ed. Burkett
11	Mr. Anderson	"	"	E. Matthew
14	W.R. Hocker,	"	"	H.N. Matthew.
13	C.D. Swallow,	Leaving Camp Fire,	"	E. Matthew.
16	R.F. Stucky,	do	"	do
18	Elmer Cain,	Defacing Formation	"	K.W. Krippene.

Forest Fires.

Eleven camp fires in automobile camps, which had been left by private motorists, were extinguished. In two cases the offenders were taken before the Commissioner and fined. Five were let off with a reprimand for lack of sufficient evidence, and in the other four cases the guilty parties were not apprehended.

Other fires reported during the month are as follows:

The John B. Trevor party reported a fire on Factory Hill on August 2nd, to Park Ranger Purdue, at the Snake River Station. The fire started from an unknown origin and had gained considerable headway before it was discovered. Mr. Trevor and his party spent two days working with this fire, which covered an area of about five acres.

Motorists left a camp fire at Lewis Lake on August 1st, which spread into the dead pine needles and was rapidly gaining headway when Ranger Custer, of the Thumb Station, arrived at the scene, having received the report from a passing motorist. The fire burnt over about 10 square feet of ground.

On August 9th, Temporary Park Ranger Fred C. Finch discovered a fire left by motorists above the Lone Star Geyser. The fire was not serious, but was in a dangerous section.

Passing motorists reported a fire on August 9th at Kepler Cascades. Assistant Chief Park Ranger E.T. Scovon, of the Upper Basin Ranger Station, extinguished the fire after it had covered an area of twenty-five square feet.

A tourist at Camp Roosevelt was responsible for a fire near the Camp on August 12th. The fire was discovered in the heavy timber back of the tents occupied by the boys attending the Forestry School. Park Ranger Dupuis, with the assistance of fourteen men, succeeded in getting it under control after it had burnt off about five acres. Favorable conditions prevented a serious fire, the men being successful in cutting it off before it reached an exceedingly heavily timbered section.

Buffalo Herder Homer C. Fear accidentally discovered a fire at the Lamar River ford, where motorists fishing in the district had left their camp fire, on August 21st. The fire had spread into the tall grass and was rapidly spreading onto the hay meadows when it was discovered. The loss of the entire hay crop at the Buffalo Farm was averted by the timely action of Fear, who extinguished the fire after it burnt off about 50 square feet of ground.

Lightning striking a tree on the Bacon Bend, August 27th, at Snow Slide Creek, was responsible for a fire in one of the few remaining fir timbered districts in the park. About twenty large trees burnt before the fire was checked. Park Ranger Davis was assisted by Prof. C.N. Arnett, of Bozeman, Montana, who volunteered to accompany him to the fire. Mr. Arnett's service is highly commended by Ranger Davis.

Fire in adjoining Forest: Park Ranger Calvin O. Davis, of the Gallatin Station, discovered a fire in the Gallatin Forest Reserve, below the Gallatin Ranger Station, on August 18th. This fire had gained considerable headway before it was discovered, and covered an area of about five acres before it was completely under control of Ranger Davis and the few men he was able to gather to assist him.

Accidents and Casualties.

Mr. Frank E. Baldwin, of Custer, South Dakota, touring the park with his wife and three small children, died on the lawn in front of the Information Office at park headquarters at 3:15 P.M., August 8th, of heart failure. Fortunately, Mr. Baldwin's brother accompanied the party in another car. The body was prepared for ship-

ment by Undertaker Walter White, of Livingston, Montana.

Mrs. Sidney S. Wurdeman, of 1201 Connecticut Avenue, Washington, D.C., died of pneumonia, at Old Faithful Inn, on August 1st, after an illness of about eight days. She was accompanied by her husband. The body was prepared for shipment by Undertaker Walter B. White, of Livingston.

On August 6th, Motorcycle Ranger Russell Sprinkel sustained a badly sprained ankle and several contusions and abrasions about the head when he collided with a Transportation Company's seven passenger car on the road between Mammoth and Norris. The Company's car was driven by Roy H. Archer and there were no passengers. The accident happened so suddenly that Sprinkel, who was knocked unconscious, remembered nothing whatever about it. When he recovered at headquarters an hour or two later, he did not even remember having seen a yellow car. He was under the doctor's care for two or three weeks, but has recovered sufficiently to resume his regular duties. The case has been reported to the Compensation Commission through the regular channels. The attorney for the Transportation Company's insurance company voluntarily paid Sprinkel the sum of \$100 as a partial reimbursement in addition to such compensation as he gets from the Government.

A truck in the Salt Lake City Boy Scout Caravan, with six occupants, turned over and rolled about 25 feet down a bank on the Dunraven Pass road on the afternoon of August 11th. Two of the boys on the truck sustained minor injuries, which were treated at the Tower Falls Ranger Station by physicians with the party.

Sanitary Engineer Arthur P. Miller, driving a light Ford Government truck, slid off the road between Mammoth and Norris, at the nine mile post, on August 11. The truck fell over, pinning Miller under the top. He suffered a broken rib and numerous lacerations and contusions, which confined him to his bed for several weeks.

Mr. William Ladgies, of Alberta, Montana, sustained a broken ankle, fractured hip, and numerous lacerations, when the car in which he was riding fell twenty five feet into the Yellowstone River, four miles south of Canyon Junction. The accident occurred on August 27th, when a car driven by P.M. Barbe, of Billings, Montana, went to pass the car driven by Mr. Ladgies. The investigation showed that Mr. Ladgies probably threw the front wheel of his car into the rear wheel of the car

driven by Mr. Barbe, which threw the car out of control.

On August 15th, at 2:15 P.M., a Jeffery car owned by Mr. C.W. Bartron, of 47 - 3rd Avenue, Salt Lake City (Utah License 43330), ran off of the grade about 1/4 mile south of Lake Junction and was overturned.

Mr. Bartron was driving the car, and with him were his wife and Mr. and Mrs. C.R. Johnson, of Salt Lake City. At the time of the accident Mr. Bartron was trying to pass a truck belonging to the Yellowstone Park Camps Company, driven by Everett Balyeat. The driver of the truck claims he did not hear the horn signaling that Mr. Barton desired to pass him, and that the first thing he knew was when he saw the hood of the Jeffery car running beside him, when he turned out as quickly as he could.

Mr. Johnson was injured to the extent of having two ribs torn loose from the ligaments. The others were not seriously injured. The damage to the car was slight, consisting of a broken wind shield and steering wheel, and the steering wheel rod was slightly bent.

Mr. Bartron said he thought the truck driver heard his horn. The truck driver stopped his truck and went to their assistance, and reports that he saw bottles, which he thought contained whiskey, lying on the ground on the side of the car, and the ranger in charge of Lake Station, who was on the ground soon afterwards, states that he thought he smelled whiskey.

A colt, owned by one of the men working with a road crew at the West Thumb, jumped into one of the hot springs, where it met its death almost instantly. According to Ranger Custer, who reported the accident on August 14th, the animal disappeared and no sign of its remains has been seen.

Sickness and Medical Attention.

Dr. W.E. Crawford continued his medical service in the park during the month and reports having made 73 professional calls on park employees. ✓

Dr. Arthur Jordan, of Helena, Montana, took the place of Dr. B.C. Brooks, of the same clinic in Helena, as physician for the Hotel Company, relieving Dr. Brooks on August 3rd. ✓

Sept 1 to Sept 14 Dr. Charles J. Rhodes, a dental surgeon of Cody, continued his practice of dental surgery in the park during ✓

the month and found considerable demand for his service.

Natural Phenomena.

Changes during August were noted as follows:

At Mammoth Hot Springs: Hymen Terrace continues to show improvement. Jupiter, Pulpit, and Minerva Terraces are all improving in activity and beauty. Somewhat more water is issuing from Orange Spring. Angel and Cleopatra Terraces and the White Elephant remain about the same as usual.

At Norris Geyser Basin: Whirligig and Mud Boiler geysers continue their increased activity; the Valentine continues to play every day or two; the Constant geyser is playing at more and more frequent intervals as time goes on, but has not yet returned to its old schedule; the Monarch has been inactive; the New Crater and Minute-man Geysers continue to play normally.

At Lower Geyser Basin: The Fountain has been inactive except for one eruption and there seems no indication of a repetition. Ranger Troutman, who witnessed the eruption, estimated that the geyser played to a height of 250 feet and did not fall below 200 feet during the one hour and ten minutes of its activity. About two hundred tourists witnessed the eruption. The Great Fountain is playing normally.

At Upper Geyser Basin: There has been little change since last month. Old Faithful has played a few times at abnormally short intervals. The fact that this geyser has thrown out a few pieces of formation does not necessarily indicate any change. The Daisy has lengthened its period a few minutes--to 80 or 85 minutes between eruptions; the Grotto, Giant, and Giantess are playing normally, but the Beehive has not played at all. The Grand Geyser is still giving wonderful eruptions two or three times a day, and the Riverside and Lone Star are playing regularly every seven hours and three hours respectively.

At the West Thumb, the three or four active (but small) geysers there have maintained their activity.

Special Visitors.

His Excellency, Robert D. Carey, the Governor of Wyoming, entered the park via Cody, on August 10th, and left via the southern entrance on August 16th. He entered again via the southern entrance on August 21st

and left via Cody on August 22nd.

United States Senator John B. Kendrick came in via the southern entrance on August 21st and left via Gardiner on the 22nd.

Ex-Governor B.E. Brooks, of Wyoming, came in via Cody on August 14th and left via the southern entrance on August 19th.

Dr. Henry Van Dyke, of Berkshire School, Sheffield, Mass., former Minister to Holland, and eminent magazine writer, arrived via Gardiner on August 11th, with his son, Tertius VanDyke, D.D. In addition to making the regular tour of the park, they visited Cody, spent one night at Camp Roosevelt, and another at the Buffalo Farm. He is now in Jackson Hole visiting his friend, Mr. Maxwell Struthers Burt, at the Bar B C Ranch.

Professor James S. Pray, Chairman of the School of Landscape Architecture, of Harvard University, arrived via Gardiner on August 4th and left via Cody on August 9th. Professor Pray, who is making a tour which includes Yellowstone, Glacier, Mt. Rainier, Crater Lake, Yosemite, Sequoia, and Grand Canyon National Parks, as well as several large national monuments, including the Devil's Tower in Wyoming, is studying problems of landscape engineering, and his splendid judgment on these problems will be of great value to the National Park Service. On part of his tour in Yellowstone, he was accompanied by Landscape Engineer Hull, who was on duty here at the time.

His Excellency, Marc Peter, Envoy Extraordinary and Minister Plenipontary to the United States from Switzerland, with his wife and two sons, entered via West Yellowstone on August 20th and left by the same route on August 22nd.

Mr. Edmund Heller, one of the foremost hunters, explorers, and naturalists of the day, arrived at West Yellowstone on August 15th, for a three months' stay, to make detailed studies of the big game animals, including buffalo, bear, moose, elk, deer, and antelope. He is also gathering material for his lectures, for which he is famous. Mr. Heller was with Colonel Roosevelt on his remarkable hunting expedition to the heart of Equatorial East Africa, and has also traveled to the remote parts of Alaska, Mexico, Peru, and Central Asia. Thus far he has confined his studies principally to bears.

Mr. I. Takaku, Assistant Passenger Traffic Manager, Government Railways of Japan, with one companion, made the park trip, entering at Gardiner on August 20th. Mr. Takaku was making a special study of our national

parks and railways, and was shown special attention and courtesy while in the park.

Mr. Y. Igarashi, American Representative of the South Manchuria Railway Company of Japan and Korea, entered at Gardiner on August 22nd and left via the west entrance on August 27th.

Mr. L.J. Kubel, Chief Engraver, Mr. John H. Renshaw, Geographer, and Mr. R.W. Barry, Topographic Engineer, of the United States Geological Survey, mentioned in your letter of August 5th, arrived in the park via West Yellowstone on August 28th, in connection with their study of the preparation of attractive maps of the park and of large sized models of the park. Arrangements were made for their accommodation at the hotels at a special rate of \$4.00 a day, and I had Park Naturalist Skinner take them around the park in his car. They left via West Yellowstone on September 3rd, much pleased with their park trip and the treatment they had received. Mr. Renshaw was connected with the park surveys of 1882, 1883 and 1884, and Mr. Kubel was a member of the Hayden party of 1878, making surveys in the vicinity of the park.

Dputy Forest Supervisor John N. Kimsey, of the Targhee National Forest, visited the park officially on August 13th to 15th, for the purpose of making a study of our system of localizing tourist camping and methods of supplying facilities to travelers, with a view to applying them to the National Forest. He was given a complimentary permit for his official automobile, and all possible information and assistance was given him to make a study of our systems.

On August 8th, a party of 230 Boy Scouts, from Salt Lake City, entered the park with seventeen motor cars and trucks, via the west entrance, touring the park and leaving on August 18th via the south entrance. This party was in charge of Chief Executive Oscar A. Kirkham, accompanied by Mr. D.E. Hammond, Field Executive, also by Doctor Charles G. Plummer, who gave the boys instruction relating to geological formations, astronomy, wild animals, etc., and by Professor J.E. Paul, who instructed them on the flora, trees, shrubs, birds, etc.

This party visited Mammoth on August 12th. Special attention was given them whenever practicable. The trip was well planned and the arrangements were well carried out except for the fact that some of the trucks broke down on several occasions, causing much delay in making camp. It was impossible to keep the party together in the park and several times it was necessary for us to assist them.

Professor W.S. Setchell, head of the Department of Botany, University of California, entered via Gardiner on August 7th and left by the same route on August 15th. Professor Setchell made a collection of algae from geyser and hot springs formations, under authority of your letter dated June 4, 1921.

Mr. C.J. Gray, Vice President of the Peabody Coal Company, of Chicago, with his brother-in-law, Mr. R. Leboy, entered at Gardiner on August 5th and left via Cody on August 9th.

Vice President Bowen C. Lingle, of the Harris Trust and Savings Bank, of Chicago, Illinois, was here August 3rd to 9th.

Mr. Frank J. Walsh, of the Walsh Motor Company, of St. Louis, entered on August 1st via West Yellowstone and left via the same route on August 4th.

Mr. William Jones, Esq., Minister of Munitions of England, with his wife and daughter, entered at Gardiner on August 8th and left via the same route on August 13th.

Mr. F.H. Shepherd, Field Manager of the Chamber of Commerce of the United States, from Washington, D.C., visited the park beginning August 1st.

Mr. Royal T. McKenna, of Washington, D.C., entered on August 2nd.

Mr. Sam A. Koser, Secretary of State, of the State of Oregon, and Mr. J. Grant Hinkle, Secretary of State of the State of Washington, came in together via Gardiner on August 5th and left by Gardiner on August 7th.

Dr. G.J. Vander Smissen, Official Physician of the New York Zoological Park, was in the park from August 25th to September 4th. He spent two days at the Buffalo Ranch, and special attention was given him during his entire visit here.

Railroad representatives who visited the park during the month were noted as follows:

Mr. Dan S. Spencer, General Passenger Agent of the Oregon Short Line, came in West Yellowstone, went as far as Old Faithful, and out the same route the same day.

Mr. Charles Donnelly, President of the Northern Pacific Railway Company, came in at Gardiner on August 30th and left via the same entrance on September 1st. While in the park he was the guest of the Hotel Company.

Mr. A.M. Cleland, Passenger Traffic Manager, Northern

Pacific Railway Company, in Gardiner August 10th, out the same way on August 12th. ✓

Mr. A.L. Craig, General Passenger Agent, and Mr. F.F. Wagner, General Advertising Agent, Union Pacific Railway, entered at Cody on August 10th and left via Gardiner on the 12th. ✓

Hyrie Powell and Fred C. Coffey, publicity agents of the Union Pacific Railway, spent several days in the park during the month.

Mr. T.T. Maxey, General Advertising Agent, Burlington Route, Chicago, came in via Cody on August 28th and left via same route on September 1st. ✓

Mr. C.H. Cutting, Traveling Passenger Agent, Union Pacific System, of Salt Lake City, entered at West Yellowstone August 30th and left via the same route on September 1st.

Mr. C.A. Cairns, Passenger Traffic Manager, Chicago and Northwestern Ry., entered via the south gate on August 21st and left via Cody on August 25th. ✓

Colonel C.R. Birdseye, Chief Topographic Engineer of the United States Geological Survey, and his assistant, Mr. Glenn R. Smith, remained in the park until August 29th in connection with their work of making surveys for the purpose of correcting errors in the park map. Most of their time was devoted to the southwest corner, which they explored in company with Mr. Wm. C. Gregg, of Hackensack, New Jersey, and Mr. J.E. Haynes, official park photographer. Mr. Haynes secured a splendid set of photographs of the many beautiful waterfalls and other scenes in this wild and little known section of the park. ✓

Mr. Wm. C. Gregg, of Hackensack, N.J., is still in the park, having made one trip to Grasshopper Glacier and one to Jackson, Wyoming, since he returned from the trip to the southwest corner. ✓

Sept. 7
Mr. Emerson Hough was in the park throughout the month of August. ✓

Dr. C.C. Adams, who came in on July 29th, remained until nearly the end of August in connection with his work as Director of the Roosevelt Wild Life Forest Experiment Station, of Syracuse, N.Y., which conducted scientific research work in the park during the summer, with headquarters at Camp Roosevelt. Assistants to Doctor Adams in this work in the park were:

Professor Richard Anthony Muttkowski, of the University of Idaho, June 18th to September 9th. Professor Muttkowski is a specialist on fish and devoted his time

principally to the study of the relation of food available in trout streams to the food eaten by trout, especially with reference to young trout, and his investigations were confined principally to streams within the vicinity of Camp Roosevelt, namely, Yellowstone River, Tower Creek, Lamar River, and Lost Creek.

Mr. Edwin R. Warren, of Colorado Springs, Colo., who is a specialist on beaver, devoted his time to the study of this interesting animal. In this work he was assisted by Mr. Ellis L. Spackman, Jr., of Pasadena, Calif.

Dr. Gilbert M. Smith, Professor of Botany, University of Wisconsin, who made a survey of plant food in trout streams and collaborated with Dr. Matkowski in checking up results.

Mrs. A.P. Davis, wife of the Director of the United States Reclamation Service, remained in the park during the month of August, and has recently joined the party of Secretary Fall, of whom her husband is a member.

17 Mr. John B. Trevor and family, of New York, are still in the park, having been traveling on trails with saddle and pack outfit since June 23rd.

Professor Alvin G. Whitney, Director of the Yellowstone Park Forest and Trail Camp, which was conducted by him near Camp Roosevelt from June 15th to August 20th, left the park about September 1st. While only six boys attended this summer school during the season, Professor Whitney considers the experiment as quite successful and was well pleased with the summer's work.

Other special visitors to the park during the month included;

Senator H.O. Barber, Mr. F.P. Arnold, Mr. G.A. Stack, Mr. H.G. Bizzell, of Lander, Wyo., in at south entrance on August 1st, in connection with the proposed repairs to Wind River road.

Mr. L.E. Laird, State Superintendent, Mr. Z.E. Severson, and Mr. Sellar, of the Highway Department, State of Wyoming, in August 13th.

Mr. W.C. Deming, of Cheyenne, owner and editor of the Cheyenne Leader and of the Wyoming State Tribune, in south entrance August 21st, out via Cody August 24th.

Mr. J. Watt Brandon, editor of the Sheridan Post, in south entrance August 21st; out Cody August 24th.

Mr. R.A. Sell, Staff Correspondent of the Houston

Chronicle, arrived August 19th.

August 1, Colonel Frank E. Amos, U.S. Army, formerly stationed at Ft. Yellowstone, with his brother-in-law, Colonel Neff, Commanding Officer of Ft. Crook, Nebraska.

Mr. J. Rieschel, Manager of Motor Transportation, Yosemite National Park Company, in August 20th.

Mr. Ben W. Barnett, State Adjutant of the Montana American Legion, arrived in the park on August 23rd.

Mr. A.C. Campbell, of Cheyenne, former United States Attorney, August 24th, via Gardiner.

Mr. C.G. Parry, General Manager of the Zion Park Transportation Company, in West Yellowstone August 17th, out via same entrance on August 24th.

Dedication of Lander Gateway.

The formal opening and dedication of the new approach road to the park from Lander, Wyoming, through the Jackson Hole, took place in Twogwotee Pass on Sunday morning, August 21, 1921.

I left headquarters August 18th and arrived at Lander, the afternoon of the 19th, where the crowds had gathered for the celebration. Appropriate ceremonies, conferences, and entertainments took place in Lander that evening, and the following morning, August 20th, about 200 automobiles left Lander, proceeding to Dubois via Fort Washakie, where the night of the 20th was spent with further entertainments and ceremonies.

Leaving Dubois early the morning of August 21st, a procession of 166 automobiles, with over 500 people, lead by Captain P.C. Spencer, President of the Rocky Mountain Highway, which is the name given to the road which leads from Denver to the southern entrance of the park via Lander and the Wind River Valley, proceeded to Twogwotee Pass, where a barbecue was held and luncheon served, followed by the formal dedicatory program. After an invocation by Rev. John Roberts, head of the Mission on the Shoshone Indian Reservation, addresses were given by Governor Carey, United States Senator Kendrick, and Ex-Governor E.B. Brooks, all of Wyoming. The program was interrupted by a terrific hailstorm. Some of the cars returned to Dubois, but about a hundred of them continued on to the park via Jackson Lake. We reached the Lake Hotel between nine and ten o'clock, where dinner was served and the dedication ceremonies finished.

August 22nd motion pictures were taken of the caravan

and of distinguished members of the party, and after that the party broke up, some returning to Lander and others making the park trip.

This event may be considered of considerable importance in the history of the park in that it brings to the attention of the public a new entrance to the park, which from a scenic standpoint is not surpassed by any of the other entrances. The road, which is 33 miles from Lander to Dubois, 70 miles from Dubois to Moran, 25 miles from Moran to the south entrance--a total of 178 miles from Lander to the park line, passes through some most interesting country, including the fertile valley of the Popo Agie and Little Wind Rivers, the Shoshone Indian Reservation with old Fort Washakie as headquarters, the valley of the main or Big Wind from the Reservation northward through Dubois and Twogwotee Pass, first traversed by Captain W.A. Jones, in 1875; the watershed of Blackrock Creek, with Buffalo Fork of the Snake, from which wonderful views of the Tetons can be obtained. Finally, the Buffalo Fork Valley itself and the scenery along the road from Moran to the park, and traverses for about 54 miles the Fort Washakie Military road, which was built in 1898 and 1900 under two appropriations of \$10,000 each made in the Acts of June 4, 1897 and June 6, 1900.

It is also important from the fact that the newspapers of Wyoming, as well as many prominent officials and business men of the State, took an exceedingly active interest in the development of this new route to the park, and the display of enthusiasm and cooperation serves to intensify this interest and promote further improvement of the road and advertising of the park. Among the men of prominence who attended this gathering were:

Mr. Emerson Hough, writer.
U.S. Senator John B. Kendrick.
Governor Robert D. Carey.
Ex-Governor B.B. Brooks.
Dr. C.C. Adams.

At Lake Hotel, the party was joined by Doctor Henry Van Dyke, Ex-Minister to Holland and distinguished writer, Rev. Tertius Van Dyck, and Mr. Maxwell Struthers Burt; and at Dubois it was joined by Mr. Wm. C. Gregg and Mr. J.E. Haynes.

Among the railroad officials who were with the party were Mr. C.A. Cairns, Passenger Traffic Manager of the Chicago and Northwestern Railroad; Mr. C.R. Custer, Assistant General Passenger and General Advertising Agent, Chicago and Northwestern Railroad, Mr. W.H. Jones, Division Freight and Passenger Agent, at Omaha, of the same road.

The Press was represented by:

Mr. C. Watt Brandon, Editor, Sheridan Daily Post, of
Sheridan, Wyoming.
Mr. J.F. Anstette, Publisher, Courier Dubois, of
Dubois, Wyoming.
Mr. R.H. Alcorn, Editor and Publisher, The Rawlins
Republican, Rawlins, Wyoming.
Mr. George C. McCormick, President, Express Courier,
Publishing Company, of Ft. Collins, Colorado.
Mr. F.L. Babcock, Editor, Wyoming Tribune, Cheyenne,
Wyoming.

A special report of this ceremony was made
on August 27th.

Trip to Grasshopper Glacier.

On August 30th and 31st, I made a trip, with
Mr. Emerson Rough, Mr. William C. Gregg, and Mr. Jack
Haynes, to Grasshopper Glacier, which is situated in
the Beartooth National Forest, a few miles north of
Cooke City, just outside of the park. This trip will
be made the subject of a special report.

Motion Pictures.

The Ben Wilson Productions, under the manage-
ment of Mr. Ashton Dearholt, Production Manager, and
Director Duke Worme, operated in the park throughout the
month and are still here.

On August 26th, Permit No. 5 was issued to Mr.
Robert W. Uphoff, of the Oregon State College, Corvallis,
Oregon, who desired to secure moving pictures for
educational purposes.

Permit was also issued during the month to Mr.
Fred A. Parrish, the Denver, Colorado, representative of
the Fox Film Company, of New York. Mr. Parrish operated
in the park from August 12th to the 30th, when he left
via Cody.

Miscellaneous.

Entertainments: Mr. Jerome Shaffer, Entertainer,
gave two entertainments in the Post Exchange Auditorium,
on August 19th and 20th. After touring the park, he gave
another entertainment in the Government Chapel, on the
evening of August 26th, the proceeds being donated by Mr.
Shaffer for the purpose of purchasing a bell for the chapel.

Religious Services: Services were held at the Government Chapel as follows:

- Aug. 7 - Morning service by Rev. J.F. Pritchard, Episcopal Minister of Emigrant, Montana; evening services by Rev. J.H. Groth, English Lutheran Minister of Livingston, Montana.
- Aug. 14- Morning and evening services by Rev. Pritchard.
- Aug. 21- Morning service by Rev. J.F. Pritchard; evening service by Rev. J.H. Groth.
- Aug. 28- Morning and evening service by Rev. J.F. Pritchard; Mass at 5:45 A.M. by Rev. Dr. Wm. J. Kirby, of the Catholic University, Washington, D.C.
- Aug. 25- Mass at 8:00 A.M., by Rev. Father Haggerty, of Notre Dame University, Notre Dame, Indiana.

Publications: The Tourist Tattler published Nos. 8 and 9 during the month and discontinued its business for the year. The editor, Mr. Al Collins, a student of the State College of Washington, Pullman, Washington, states that he made expenses and was satisfied with the summer's venture, and hoped to return again next year. Copies of Nos. 8 and 9 are enclosed.

First Flying Machine in the Park: About 6:30 P.M., August 6, 1921, a Biplane landed between the Lake Ranger Station and Yellowstone Lake. The occupants registered as the owner, Mr. O.E. Phillips, of Homingford, Nebraska, and his assistant, Mr. W.C. Brooks, of the same place, who stated they were touring through the northern part of the United States and Canada. They came to the park from the Big Horn Valley Ranch. The plane was a "Standard" Biplane, with a capacity of three passengers, 150-H.P. Spad Motor, known as the "Lincoln Standard Tourabout".

On August 7th, they broke a propeller while landing in the long grass, and it was not until August 23rd that their machine was again repaired so as to be serviceable. They requested permission to make a few flights with passengers, charging at the rate of about \$25.00 per passenger for a fifteen minute flight, for the purpose of helping to pay their expenses and as an experiment with a view to securing a concession next year. I did not approve this, however, and gave them no authority to take passengers. After the machine was repaired, on the 23rd, the pilot made five flights from the Lake, taking with him on one occasion Mr. Fred Parrish, the Denver representative of the Fox Film Company, who made some photographs from the plane.

Mr. Brooks left the Lake Outlet with the biplane, at 5:00 P.M., on August 6th, for Cody, and Mr. Phillips left for the same place by regular bus on the following morning.

This is believed to be the first flying machine

that has ever landed in the park, although there is an unconfirmed report that a United States Forest Service machine landed in the park in November, 1919, while flying across, but this has not been made a matter of record.

Copies of memoranda of August 1, 1921, and August 18, 1921, to the Park Ranger Force, are enclosed for your information.

X. RECEIPTS AND REMITTANCES:

The regular monthly report of revenues due, collected, and transmitted during the month of August is enclosed. The total amount of money enclosed, as shown by this report, is described as follows:

Postal Money Order, No. 47321, dated August 5, 1921, drawn by the Postmaster at Yellowstone Park, Wyo., on the Postmaster at Washington, D.C., to your order, ...	\$10.43
Draft No. 205, dated August 3, 1921, through Yegen Bros., Bankers, on the National Bank of the Republic, Chicago, drawn to your order by Mesdames Pryor & Trischman,	13.86
Check No. 209, dated August 6, 1921, drawn to your order by J.E. Haynes, on Yegen Bros. Bankers,	23.40
Check No. 1127, dated August 25, 1921, drawn to your order by the Yellowstone Park Camps Company, on the Northwestern National Bank, of Livingston, Montana,...	98.62
Check No. 1181, dated August 3, 1921, drawn to your order by the Yellowstone Park Transportation Company, on the National Bank of Montana, Helena, Montana, ...	165.20
Check No. 1162, dated August 5, 1921, drawn to your order by the Yellowstone Park Transportation Company, on the National Bank of Montana, Helena, Montana, ...	119.17
Check No. 719, dated August 3, 1921, drawn to your order by the Yellowstone Park Hotel Company, on the National Bank of Montana, Helena, Montana,	<u>91.37</u>
Total,	\$512.05

Acknowledgment of receipt of the enclosed money
is requested.

Cordially yours,

Horace M. Albright,
Superintendent.

The Director,
National Park Service,
Department of the Interior,
Washington, D.C.

Enclosures.

GAL:CE

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
Yellowstone Park, Wyo.

WEATHER CONDITIONS--MAMMOTH HOT SPRINGS.

A U G U S T, 1921.

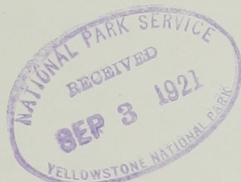
Temperature: Monthly Mean 60.2° . Departure -0.7° . Moderate temperature prevailed generally during the month, the highest being 82° on the 30th and the lowest 38° on the 5th.

Precipitation: Total 1.03 inches. Departure + 0.01 inch. Light showers occurred on 11 days. There were fewer and less severe thunderstorms than for the average August.

Snowfall: None.

Wind: Total movement about normal. Maximum velocity was 32 miles from the south on the 17th.

Sunshine: Percentage of possible, 71. Normal 71.



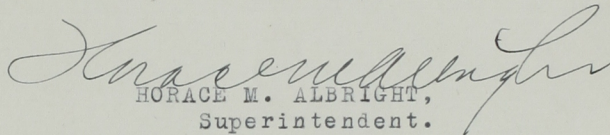
E. H. Fletcher,
Observer.

September 2, 1921.

September 3, 1921

Memorandum to Mr. Lindsley:

Mr. D. S. Spencer, General Passenger
Agent of the Oregon Short Line, was at Old
Faithful September 2nd, in West Yellowstone
and out the same way the same day.


HORACE M. ALBRIGHT,
Superintendent.

Report of Power Plant for August 1921

al Generated. 22430

to Concessioners. ⁸²⁶¹~~8093~~

ect Lighting 1280 9551

erment Buildings ³in Lines, 12879

k Load 7/26 8 PM 64KW.

During the month of
August repairs to the
Telephone Line were
completed between
Lake Station and Sylvan
Pass Ranger Station also
between Thumb Station
Snake River Station,
between Lake Station
Thumb Station Light
repairs were made to
at 2nd and about $\frac{3}{8}$ mi
moved and rebuilt to take
up from formation
From Mammoth to
Morris a Metallic Line
was placed in service
on both Park Lines, going
through repeating coils at
Morris and tying on to the

Work has also been
started on the power
line at Mammoth which
consists of resetting of
some of the poles and
putting on guys.

E. Allan

Brief resume of work started during the month of August
Park Sanitation.

1. Survey for sewers and disposal system for the Upper Geyser Basin completed .

2. Locations of positions for disposal systems at the Canyon Camp (Hays), Gardiner Checking Station and Canyon Ranger Station completed.

3. Design of septic tank for Gardiner Checking Station submitted to Mr. Albright.

4. ✓ New stone toilets completed on top of Mt. Washburn.

5. Design for Canyon sedimentation tank completed. Grades and lines for sewer at Hays' Canyon Camp set and construction work begun.

6. Location of position for sewage disposal at the Lake Camp completed in conjunction with Messrs. Hays and Hull.

7. The usual analysis of water continued thru the month.

ARTHUR P. MILLER
Junior Assistant Sanitary Engineer
U . S. Public Health Service.

September 1, 1921.

Brief Outline of Work accomplished during the month of

August by the Painting Division.

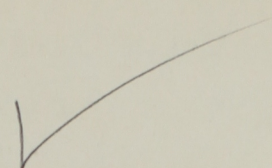
still painting outside of wooden Quarters. Three
dungs completed, and fourth large set of quarters
commenced. Made and painted about 100 signs for
about park.

Expect to go into park to-morrow placing & straightening
signs. Expect to finish Allen's Otter and four quarters
now as H.C. Pahr this month.

Fill out briefly and return to Mr. Lindsley before the
5th of the following month. Data needed for monthly report.

Lindsay.

MEMO:



I found that during the month of July 1921, about 22,000 meals were served at our Government camps at an average cost of $30\frac{1}{2}$ cents per meal. Since employees who eat at these camps are required to pay at the rate of $33-1\frac{1}{3}$ cents per meal, the Government realized about \$606.67 from the camps during the month.

I also found that freighting from Mammoth to points in the park cost the Government $21\frac{1}{2}$ cents per ton mile, but I held the cost of freighting between Gardiner and Mammoth at \$3.00 per ton for the five miles, which includes the handling expense at both points.

Taking an average from all camps out in the park, I found that during the month it cost $27-1\frac{1}{11}$ cents to forage one horse for one meal.

George T. Dustman,
Cost Clerk.

Plumbing work done during
the month of August 1921

General repairs and maintenance to water system, Sewer system & inside Plumbing at Mammoth Springs

Construction new Auto Camp at Mammoth running 2,000 ft of $3\frac{1}{4}$ " ~~4"~~ 9. 9. pipe and connecting same onto the Mammoth Water System. Five faucets were installed at the Mammoth camp for use of Tourists

Lake Auto Camp
Fishing Buggy Building
Cement Tank 1,000 gallon capacity and running 4,000 ft 2" 9. 9. pipe 2,000 ft $1\frac{1}{2}$ " ~~2,000 ft~~ and 2,600 ft $3\frac{1}{4}$ " for supplying above camp with a potable water supply. 18 faucets were installed throughout the entire camp

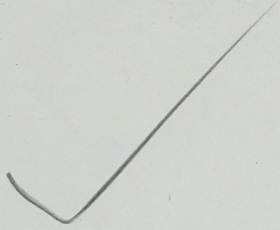
September 1, 1921.

REPORT ON WORK PERFORMED.

To: Chester A. Lindsley, Assistant Superintendent.

From: M.P. Skinner, Park Naturalist.

Park Naturalist Skinner prepared a set of monthly notes on flowers, geology, animals, and birds; 48 sets were posted on bulletin boards, and 3388 sets given out from the Information Office. 234 geological specimens were collected for the Museum. 35 lectures were given on "Tower Falls," "Whitebar," "Fossil Forests," "The Canyon," "Yellowstone National Park," "History of Yellowstone National Park," "Animals," and miscellaneous subjects. Data on natural features^{was} collected daily. Inspections of forests were made and the findings reported. Other studies made by him resulted in reports on Seasonal Changes and Natural Phenomena. Eighteen days were devoted to special work assigned by the Superintendent. Four fires were put out, *by him, during the mo*



September 1, 1921.

REPORT ON NATURAL PHENOMENA.

To: Chester A. Lindsley, Assistant Superintendent.

From: M.P. Skinner, Park Naturalist.

At Mammoth Hot Springs, Hymen Terrace continues to show improvement. Jupiter, Pulpit, and Minerva Terraces are all improving in activity and beauty. Somewhat more water is issuing from Orange Spring. Angel and Cleopatra Terraces and the White Elephant remain about the same as usual.

At Norris Geyser Basin: Whirligig and Mud Boiler geysers continue their increased activity; the Valentine continues to play every day or two; the Constant geyser is playing at more and more frequent intervals as time goes on but has not yet returned to its old schedule; the Monarch has been inactive; the New Crater and Minute-man Geysers continue to play normally.

At Lower Geyser Basin: the Fountain has been inactive except for one eruption and there seems no indication of a repeat; the Great Fountain is playing normally.

At Upper Geyser Basin there has been little change since last month: Old Faithful has played a few times at abnormally short intervals, the fact that this geyser has thrown out a few pieces of formation does not necessarily indicate any change; the Daisy has lengthened its period a few minutes to 80 or 85 minutes between eruptions; the Groot, Giant, and Giantess are playing normally but the Beehive has not played at all; the Grand geyser is still giving wonderful eruptions two or three times a day; and the Riverside and Lone Star geysers are playing regularly every seven hours and three hours respectively.

At the West Thumb, the three or four active (but small) geysers there have maintained their activity.

September 1, 1921.

REPORT ON SEASONAL CHANGES.

To: Chester A. Lindsley, Assistant Superintendent.

From: H.P. Skinner, Park Naturalist.

Botanical: While most of our summer and autumn flowers were in bloom throughout the Park at the beginning of the month, the number and variety steadily declined until at the end only Sunflowers, Asters, and Rabbit bush were blooming below 6000 feet; Rocky Mountain Bee Plants at Mammoth; and a few Fireweed, Geraniums, Cinquefoil, Lupines, Harebells, Goldenrod, Purple asters, Yarrow, Wild Parsley, Fringed Gentians, and Snapdragons on the Park plateau. Stone Crop was the only flower remaining above timberline.

Ruckleberries have been extremely abundant. Kinni-kinick berries were red and ripe on the 26th. Geraniums and dog-bane began changing color about the 20th and aspens on the 27th.

Birds: Migratory birds were first seen: Willet on the 12th; Solitary Sandpiper on the 21st; Pintail duck on the 26th; and Gadwalls on the 28th. Bluebirds began flocking and moving south on the 12th and continued until the end of the month. Nighthawks left during the middle of the month. The increased number of wild-fowl became noticeable about the 15th. Pink-sided Juncos began flocking on the 18th and the movement south was very marked by the 31st. Cliff swallows began leaving on the 21st and continued to go until the end.

Animals: Pine squirrels were seen hoarding fir cones as early as the 12th. At the end of the month: the Whitetail deer were still in the red coat but the Mule deer had just begun to change to the winter gray; a few Woodchucks and Ground Squirrels were still to be found.

According to this data the autumn is beginning eight days earlier than the average season.

Report for August.

Lectures at Hotel -----	30
Lectures at Camp -----	27
Lectures at Auto Camp -----	27
Total -----	84

On Aug. 3 rd. there was no talk at the Camp because they preferred to have a prize fighter talk - such rivalry!

On Aug. 4th there were over 300 at the auto camp, for the talk.

On Aug. 8th there was some car trouble and hence we did not go to the Camp because that would have made us five minutes late.

On Aug. 12 no auto camp talk because of rain.

On Aug. 15 no auto camp talk because of rain.

On Aug. 23 no auto camp talk because of rain.
no Camp talk because of flat tire which would have made us ten minutes late.

I have enjoyed giving these talks and have found the people both courteous and appreciative. I especially appreciate on my part the fine spirit and courteousness of the men who have driven me - a not altogether pleasant job at the end of a day's work.

Respectfully submitted,
Mary A. Rolfe.

1921 August Sales.

Panorama	— 29	26
Topographic	— 62	59
Glimpses	— 9x	92
Geological Hist.	— 37x	357
Fossil Forest	— 225	224
Bulletin, 611	— 8	8
Bulletin 612	— 4	6
H. F. F. West.	— 0	—
H. F. F. Con.	— 1	1
Hayes Guide	— 66	64
Truthful Lies	— 97	94
Port Folio	— 152	150
		<u>1081</u>

Hotel Guide Parties — August 1921

Morning Afternoon

Sup	59
"	0x8
Total	— 152x

Camp.

Morning Parties	— 1150
"	— 8x0
Total	1990

Sup 60

Total	1524
-------	------

Camp	1990
------	------

Sup 119

Grand Total — 3514

Total

Total Number of Trips — 119
(by Guides)

Bull 6 1/2
11/11/11

West.
H.H.H.

East.
H.H.H.

Haines

Truthful Lies

2017 10/10.

2 1
1 1
4

1

1

8 1
9 1
9 1
8 1
4 1
11 1
4 1
3 1
7 1
1 1
2 1
66

6 1
7 1
9 1
12 1
13 1
13 1
10 1
11 1
9 1
3 1
97

3 1
2 1
30 1
16 1
23 1
11 1
6 1
5 1
9 1
10 1
9 1
152

Special Dedication Program

Lander Southern Entrance to Yellowstone National Park at Two-gwo-tee Pass, Wyoming August 21, 1921



W. H. STONE, MASTER OF CEREMONIES



"American Boys" *Lander Band*

Invocation *Rev. John Roberts*

Words of Welcome . . . *Hon. Robert D. Carey*
Governor of Wyoming

Yellowstone's Gift to the Nation *Hon. J. B. Kendrick*
United States Senator

Frontier Nomad *Hon. B. B. Brooks*
Ex-Governor of Wyoming

White Man's Friend . . . *Dick Washakie*
Chief of Shoshones [Son of Chief Washakie]
Narrated by Dewey Washakie, grandson of Chief Washakie)

March of Progress *Yellow Calf*
Chief of Arapahoes
Interpreted by Tom Crispin, Carlisle graduate)

Invocation Address . . . *Hon. H. M. Albright*
Supt. Yellowstone Park

"America" *Assembled Chorus*

Invocation *Assembled Chorus*

"American Boys" *Lander Band*

August 7, 1921.

MEMORANDUM OF FIRST FLYING MACHINE
TO LAND IN THE PARK.

About 6:30 P.M., August 6, 1921, a Biplane landed between the Lake Ranger Station and the Yellowstone Lake. The occupants registered as the owner, Mr. O.E. Phillips, of Homingford, Nebraska, and his assistant, Mr. W.C. Brooks, of the same place, who state they are touring through the northern part of the United States, and Canada. They came to the park from the Big Horn Valley Ranch.

The plane is a "Standard" Biplane, with 150-H.P. Spad motor, known as the "Lincoln Standard Tourabout", with a capacity of three passengers.

To-day they broke a propeller in the long grass, and have sent for parts. Say it will be from 4 days to a week before they can move on.

They are anxious to secure permission to make a few flights with passengers after they get the machine repaired, 10 minutes to 2 hours each, charging about \$25 per passenger for a 15-minute flight, remaining a week or two to help pay their expenses. Also desiring to experiment with a view to securing concessions next year.

Machine repaired. 23 1/2 x afterwards made 5 flights, one of them with Mr. Parush of Fort Belknap Co. & N.Y. Mr. Brooks left the Lake Ranger Station with biplane at 5:00 P.M. Aug. 26, for Cody, and Mr. Phillips left for the same place by regular bus the following morning.

* There was an unconfirmed rumor that a U.S. Forest Service machine landed in the Park in November, 1919, while flying across, but this has not been made a matter of record.

MEMORANDUM.

August 24, 1921.

On August 15th, at 2:15 P.M., a Jeffery car owned by Mr. C.W. Bartron, of 47 - 3rd Avenue, Salt Lake City (Utah license 43330), ran off of the grade about 1/4 mile south of Lake Junction and was overturned.

Mr. Bartron was driving the car, and with him were his wife and Mr. and Mrs. C.R. Johnson, of Salt Lake City. At the time of the accident Mr. Bartron was trying to pass a truck belonging to the Yellowstone Park Camps Company, driven by Everet Balyeat. The driver of the truck claims he did not hear the horn signaling that Mr. Bartron desired to pass him, and that the first thing he knew was when he saw the hood of the Jeffery car running beside him, when he turned out as quickly as he could.

Mr. Johnson was injured to the extent of having two ribs torn loose from the ligaments. The others were not seriously injured. The damage to the car was slight, consisting of a broken wind shield and steering wheel, and the steering wheel rod was slightly bent.

Mr. Bartron said he thought the truck driver heard his horn. The truck driver stopped his truck and went to their assistance and reports that he saw bottles, which he thought contained whiskey, lying on the ground on the side of the car, and the ranger in charge of Lake Station, who was on the ground soon afterwards, states that he thought he smelled whiskey.

Chester A. Lindsley,
Assistant Superintendent.

AUGUST 1921

Superintendent Horace M. Albright,
Yellowstone National Park,
Yellowstone Park, Wyo.

Dear Mr. Albright:

The following is my monthly report to you on the activity of the Ranger Force for the month of August 1921. This report includes all of the business affairs handled by this department during the month.

My report to you is as follows:

I. GENERAL CONDITIONS:

(a) Road and Weather Conditions:

Roads over the entire Park were patrolled by the motorcycle rangers. Their reports show roads in excellent condition, and where they encountered or investigated accidents, they reported the responsibility was due to no fault in the construction or condition of the road.

Weather conditions for travel and work was very favorable. The usual drop in tourist travel was not noticeable until after August 20.

An added feature to the park history, was the formal opening of the Southern Entrance of the park, at Lander, Wyoming, where a large number of tourists from all sections of the country attended the celebrations August 21. The road leading to the Park from Lander is thru a picturesque country, decidedly undeveloped and almost impassible for the average car.

(b) Travel.

All travel records for the Yellowstone National Park were broken during the month. The greatest single day for motorists and rail tourists in the history of all National Parks was August 8, 1921, when 1,659 people entered the Yellowstone. On this same date 308 automobiles were admitted to the park, surpassing the record of 273 automobiles established August 9, 1920. ✓

The statistics show an increase of 7,594 tourists and 2,372 automobiles, up to and including August 31, 1921, over that of last year up to and including the same date. The gain in motorists for the month of August was 1,142 tourists in 472 automobiles, while the tourists entering by rail shows a loss of 2,464 tourists. ✓

Comparative statistics for the month of August is as follows:

	RAIL			MOTOR			TOTAL	
Entrance :	Hotels :	Camps :	Cars :	Pass. :	Misc. :	Month :	Season :	
North :	1657 :	1551 :	1797 :	6239 :	93 :	9540 :	23697 :	
West :	2639 :	2023 :	1861 :	6973 :	71 :	11706 :	27414 :	
East :	874 :	1093 :	2191 :	7501 :	63 :	9531 :	20480 :	
South :	:	:	548 :	1961 :	34 :	1995 :	3376 :	
Total :	5170 :	4667 :	6397 :	22674 :	261 :	32772 :	74967 :	

All entrances to the Park are using the regulation Washington G. P. O. automobile permit. These permits were received August 4th and all permits mimeographed or specially printed, were cancelled.

A mistake in the numbering of these permits will make it necessary to requisition a new supply next year as there will not be enough of this issue carried over to last the entire season. Unless a new supply is received, I anticipate trouble in keeping the records straight. The order for the 1922 season should call for a different color, with the consecutive numbers from 1 to 20,000.

II. Personnel:

The resignation of Park Ranger Elmous M. Mead, W. A. E., was received August 31 and it has been recommended that it be accepted taking effect September 5th, 1921.

Park Ranger William H. Harrison, W. A. E., terminated his services with this department August 17. It will be necessary to request his resignation to make our records complete.

Temporary Park Ranger Pierce A. Cumings, was relieved from duty and his services terminated with this department August 22nd.

Temporary Ranger Belknap C. Hawkes requested that he be relieved from duty and his services terminated August 25th. His request was approved and accepted according to the request.

Hugh D. Cramer, employed as a ranger was assigned to duty with the Ben Wilson Production Company, and his services terminated with this department August 3rd.

The following named men will be relieved from duty and their services terminated September 1st:

Mary A. Rolfe,
Robert B. Armstrong,
William C. Troutman,
Douglas McMurray.

The following named men will be relieved from duty and their services terminated September 5th:

Kenneth W. Krippene,
G. Shelby Ferguson,
Frank H. Schramm,
Elmous M. Mead.

The following named men will be relieved from duty and their services terminated with the department September 10:

Edw. B. Cogswell,
Harold E. Pammel,
Cortez M. Jennings
Clinton S. Ferris.

The following named men will be relieved from duty and their services terminated September 15th:

G. Gordon Cottier,
Marguerite Lindsley,
Eugene V. Robertson,
Ray D. Teesdale,
Carroll P. Donohoe,
Paul R. Wylie,
Frank H. Knight,
Edward P. Buckenmyer,
James S. Baker,
Samuel A. Kaplan
George D. Lecorm,
Eugene Cohn.

The following named men will be relieved from duty and their services terminated September 20th:

Knox D. Moore,
Norman W. Hibbert,
Frank J. Parsch,
Clarence E. King,
Warren H. Loyster,
Leon D. Mink,
Emmet S. Matthew,
Hollis H. Matthew,
Russell Sprinkel,
Florian J. Ubel,
Vernon S. Downs,
Milton H. Lichtenwallner,
Cyril C. Moore,

The Following named men will not be released until later in the season:

Earl D. Glynn,
Donald F. Mattson,
Sam Hurless,
Wendell S. Keate.

Transfers.

Park Ranger Earl S. Bowman, relieved from duty at the Snake River Station August 26, to make preparations for winter duty at the Upper Yellowstone Station.

Temporary Park Ranger Chester L. Butler, relieved from duty at the Fountain Station August 28, to make preparations for duty at the Upper Yellowstone Station.

Temporary Park Ranger Fred C. Finch, from Upper Basin Station August 31 to Fountain Ranger Station for relief of William C. Troutman.

Temporary Ranger Edw. P. Buckenmyer, Lake Station, transferred to West Yellowstone Checking Station August 14, to relieve Cyril C. Moore.

Temporary Park Ranger Cyril C. Moore, transferred from West Yellowstone Checking Station to Lake Ranger Station to relieve Edw. P. Buckenmyer.

Additions.

George D. Lecornu, employed as acting temporary ranger at \$100 for duty at Upper Geyser Basin, August 18, in relief of William H. Harrison.

Knox D. Moore, employed as acting temporary ranger August 21, to relieve Pierce A. Cumings, at \$100.

Le Cottrell, former permanent ranger, notified to report for duty September 1, at Snake River Ranger Station.

Permanent Employment.

The following named temporary rangers have been granted permanent positions to fill vacancies on the force caused by resignations:

Chester L. Butler, of Montana
Fred C. Finch, of Montana
Leon D. Carter, of Michigan.

The request for the permanent appointments of the above named men have been forwarded to the Washington office of the National Park Service. Their increase of \$20.00 per month is to take effect October 1, 1921.

The following named men will be employed again this winter as permanent rangers:

Lee Cottrell, of Montana
Albert T. Bicknell, W. A. E., appointment.

Leave of Absence:

Many of the temporary rangers were allowed two day trips around the park. These men seeing the park for the first time.

Leave of absence was granted to Temporary Park Ranger Russell Sprinkel on account of injuries sustained in an accident August 6th. His leave was granted as follows:

August 7 to 13 inc. Annual.
August 13 to 17 inc. Sick.

Orders have been received from Superintendent Albright not to allow any of the permanent men annual leave until after the hunting and trapping season is over, where it effects patrols in these areas.

III. WORK COMPLETED:

(a) Haying:

Measurements of the contracted hay on the Gardiner Meadows

Lowered 1105.00

were made by Chief Ranger James McBride and Wendell M. Bishop. From these measurements it was found that the yield of this crop amounted to 148.2 tons.

Two ricks of hay on the Yancy Ranch measured 96 tons. With the surplus from the harvest of 1920 we now have almost 150 tons of hay at this ranch.

Buffalo Keeper Lacombe completed haying on his meadows August 9th and estimates his crop at about 300 ton. (2377) With the surplus of the 1920 cutting, there is approximately 700 tons of hay at the Buffalo farm.

Haying operations at the two hay ranches on Slough Creek, is completed, but the measurements of the stacks have not been taken. It is estimated that the harvest at these two ranches will reach approximately 600 tons.

*230
259
489*

The estimated crop of hay for this winter's use is as follows:

Gardiner,	148.2 ton.
Yancy,	150.0 ton.
Buffalo Farm,	700.0 ton.
Slough Creek,	<u>600.0 ton.</u>
Total,	1598.2 Tons.

(b) Trail Work:

Trail work under the direction of Henry Anderson was conducted in the eastern and southern district of the Park during the month of August. His work is as follows:

The new cabin at Fox Creek was completed with the exception of a few details during the month of July. It is now ready for winter use and is claimed to be one of the best cabins in the entire park.

The Cabin Creek cabin, one of the oldest in the Park was given a thorough overhauling by Anderson and two of his men. The old roof was torn completely off and a new roof, 16 inches higher than the old was built. In addition, a new floor was built in and the logs rechinked.

Several days were consumed putting new cordoroy on the old Lynx Creek Trail. This trail is now in first class condition.

Old trails in the Heart Lake district were cleaned out and one new trail built to the lake from Snake River.

The crew built a new trail from Mountain Creek to Eagle Pass and then to Sylvan Pass during the latter part of the month. This trail covers a distance of about 30 miles and is through one of the wildest sections of the park. The new trail is said to be cut through a section of lighter grades and over a shorter route. ✓

(c) Formations:

Plans are being made to give all of the Geyser Basin formations a thorough cleaning during the coming month. All names will be obliterated, refuse removed from the acting formations and trails across these formations repaired. It has been recommended that walks be built across the formations around the Giant Geyser and a system of walks built in the Black Sand Basin. ✓

(d) Stations:

The construction of the new ranger stations at the Upper Geyser Basin and Grand Canyon is progressing rapidly. The men in charge of these districts are making preparations to get the new stations in readiness for the 1922 tourist season. ✓

(e) Forage:

Requisitions have been made out for forage to be used at all of the ranger stations in the interior of the Park during the coming winter. This is to be trucked out to these stations during the early part of September. The order for the forage is as follows:

Tower Falls,	8000 lbs. hay,	6,480 lbs. oats.
Sylvan Pass,	4000 lbs. hay,	6,480 lbs. oats.
Lake,	4000 lbs. hay,	8,640 lbs. oats.
Grevice,	4000 lbs. hay,	4,320 lbs. oats.
Upper Yellowstone,	4000 lbs. hay,	3,240 lbs. oats.
Norris,	2000 lbs. hay,	1,080 lbs. oats.
Snake River,	6000 lbs. hay,	6,480 lbs. oats.
Canyon,	2000 lbs. hay,	3,240 lbs. oats.
Riverside,	4000 lbs. hay,	4,320 lbs. oats.

Coal oil will be issued in the amounts stated as follows:

Norris	10 gal.	Canyon	10 Gal.
Lake,	30 "	Snake River	30 "
Sylvan Pass	30 "	Upp. Yell.	30 "
Riverside,	30 "	Gallatin	30 "
Bechler,	30 "	Tower Falls	30 "
Soda Butte	30 "	Slough Creek	30 "
Grevice	20 "	Hellrearing	10 "
Slough Cr.	20 "		

New heaters and cook stoves have been received by the department and issued as follows;

Cooking Stoves,

Lake, 2
 Bechler River, 2
 Soda Butte, 1
 Hellroaring, 1

Heating Stoves,

Lake, 2
 Bechler 1
 Snake River 1
 Sylvan Pass 1
 Soda Butte 1
 Crevice 1
 Slough Creek 1
 Hellroaring 1

Rations:

Rations for the snow shoe cabins have been ordered and preparations completed for delivery to the cabins in the proportion stated below;

Grayling,	60 rations.
Cascade,	60 "
Aster Creek	60 "
Thumb Station	60 "
Park Point	60 "
Cold Creek	60 "
Morris	60 "
Hellroaring	60 "
Slough Creek	60 "
Sportsman Lake	30 "
So. Riverside	30 "
Buffalo Lake	30 "
Mountain Ash	30 "
Harebell	30 "
Fox Creek	30 "
Cabin Creek	30 "
Frost Lake	30 "
Pelican	30 "
Miller Creek	30 "
Madison June.	30 "
Cooke City	
East Boundary	30 "

(f) Auto Camps:

A new auto camp with an area of about 40 acres was prepared at Mammoth Hot Springs along the Gardiner-Mammoth road. Water lines were installed and comfort stations erected.

A new camp ground was built near the Thumb Ranger Station with water pipe lines and comfort stations which has accommodated an average of between 25 and 30 motorist parties during the month.

The Upper Geyser Basin auto camp accommodated more tourists in one night than any other camp in the park; 235 cars having camped there on the night of August 9. The check on the Mammoth Auto Camp shows 172 cars to be camped on the night of August 13. These auto camps have averaged far better than 100 cars a night for the entire month.

(g) Service to the Public;

During the month of August 1921, 10,820 visitors were recorded in the Information Office at Headquarters against 5,252 in the month of August 1920. With the number of visitors in the Information Office this year 5,045 tourists were given the Park Publications relative to natural wonders including the rules and regulations. In addition to the rules and regulations distributed, 1,232 pamphlets of other National Parks were given to these tourists. Documents on Geysers, Fossil Forests, Geological History, and National Park Portfolios were sold to tourists. 1,081 publications being distributed to regulation sale price.

Guide Service was conducted at Mammoth Hot Springs and at Upper Geyser Basin during the entire month. The guides at Upper Geyser Basin serving almost 50% more people than were conducted over the formations at Mammoth Hot Springs. According to the records of these guides 1,524 Mammoth Hot Springs Hotel tourists and 1,990 Mammoth Hot Spring Camp tourists were taken over the formation in 119 trips lead by Temporary Park Rangers Mattson, Lindsley and Cogswell.

At Upper Geyser Basin 3,503 tourists were conducted from Old Faithful Inn and 5,635 tourists were conducted from Old Faithful Camp by Temporary Park Rangers Ubel, Teesdale and Parsch. We have no statistics of the number of people taken over the Mammoth Hot Springs Formations by the Yellowstone Park Transportation Company during the month of August.

(h) Aid to County Officials:

Word from Sheriff McCarty of Park County was received August 14 requesting the apprehension of John T. Mercer of Livingston, Montana, who they claimed was violating the Mann Act, by transporting minor women from one state to another. They were taken into custody and ejected from the Park, per the request of the officials

of Park County.

(1) Aid to Forest Officials:

fire in adjoining forest

Park Ranger Calvin O. Davis of the Gallatin Station discovered a fire in the Gallatin Forest Reserve, below the Gallatin Ranger Station, August 18th. This fire had gained considerable headway before it was discovered and covered an area of about five acres before it was completely under control of Davis and the few men he was able to gather to assist him.

Following the usual procedure, 16 complimentary permits were issued to members of the Department of Agriculture who were passing thru the park or had official business within the boundaries.

(j) Crevice Station:

The erection of the new station on Crevice Mountain, being built under contract by Thomas Lewis, is completed with the exception of interior finishings. The old station has been torn down and all timber salvaged for winter fuel use. This station is one of the most picturesque in the park and is built to withstand the weight of heavy snows.

(k) Additional Improvements:

Buffalo Keeper Lacombe has made arrangements with Oscar Roseborough to disc the hay meadows at the Buffalo Farm for re-seeding purposes. The work will take about forty days time and will cost approximately \$500.00. The agreement calls for double discing and double overlap.

The erection of a new checking station at the Gardiner Entrance to the park began about August 15. This improvement will dispense with an unsightly tent a necessity caused by the location of the station and main entrance to the park.

V. OTHER MATTERS OF GENERAL INTEREST:

(a) Wild Animals:

Bear.

Reason to believe that the bear are increasing in the Park is evident in the fact that they could be seen in

larger numbers at the garbage dumps. As many as 22 have been seen at one time in the dumps at the Lake and a like number at the Canyon. At one time there were five grizzlys at the Canyon dump and nine at the Lake dump. This is the greatest number of grizzlys seen at one time in several years. Nine bear were in the Upper Basin dump on several occasions during the month, indicating that there is some increase over the last few years.

Fishes

Fish planting for the season was completed by the end of the month. The fry as they were planted are listed below:

July 2,	Grebe Lake,	Grayling,	1,000,000.
July 15,	Virginia Cascades	Rainbow,	20,000.

Black-Spotted in August;

Aug. 10,	Jones Creek,	53,000.
Aug. 10,	Cache Creek, (Eyed Eggs)	132,000.
Aug. 16,	Soda Butte--Mouth Pebble Creek,	46,200
Aug. 16,	Soda Butte Station	21,000.
Aug. 18,	Rose Creek and Beaver Dams,	71,400.
Aug. 19,	Slough Creek,	79,800.
Aug. 19,	Black Tail Creek,	12,600.
Aug. 19,	Lava Creek,	5,400.
Aug. 20,	Lamar River Flats,	70,000.
Aug. 21,	Tower Creek,	42,000.
Aug. 21,	Antelope Creek,	117,600.
Aug. 23,	Slough Creek, mouth of Buffalo	63,000.
Aug. 23,	Slough Creek, Upper Ranch,	50,400.
Aug. 24,	Lamar River,	14,000.
Aug. 24,	Upper Slough Creek,	56,000.
Aug. 24,	Lamar, at Buffalo Farm,	163,800.
Aug. 26,	Slough Creek,	70,000.
Aug. 26,	Lamar River at Soda Butte,	84,000.
Aug. 27,	Fish Lake,	155,000.
Aug. 30,	Lamar River at Buffalo Farm,	50,000.

TOTAL to Date for season,

2,377,600 fishes.

Buffalo

Four parties of tourists interested in the preservation of buffalo visited the Buffalo Farm during the month and were shown the herd by Buffalo Keeper Lacombe.

The rutting season of these animals is almost a month late and the bulls are in very poor shape.

Moose

Temporary Park Ranger Litchenwallner, stationed at Upper Yellowstone during the summer, reported that he had seen 107 Moose in that district during the month of August, and that there were a large number of calves with the cows.

He also reported that the Elk were banding in large numbers indicating an early winter.

Stray Stock

^a One stray black horse impounded by Park Ranger Larsen July 8 was claimed and properly identified by the operators of the Swan Lake Flat Dairy Herd.

A two year old steer impounded by Buffalo Keeper Lacombe was claimed by a rancher east of the Park who was able to properly identify the animals, the steers being held at the Buffalo Farm pending the decision of it's owner on proposals made for it on foot at the Buffalo Ranch.

Fires

Fire protection for the month of August was handled in an exceedingly efficient manner and the fact that the ranger force was protecting the most secluded areas of the Park from all fire danger was evidenced in the prevention of three fires located in heavy timbered districts which were discovered at the opportune time and possibly great devastation averted.

The fires as they were reported and their estimate follows:

Only eleven fires were left in auto camps by motorists during the month of August. Two offenders of which were taken before the U. S. Commissioner and fined according to the judgement of the court. Five were brought to the Chief Ranger's Office and dealt with according to the instructions of the Superintendent.

The fires are as follows:

Factory Hill.

The John B. Trevor party reported a fire on Factory Hill August 2, to Park Ranger Purdue, at the Snake River Station. The fire started from an unknown origin and had gained considerable headway before it was discovered. Mr. Trevor and his party spent two days working with this fire which covered an area of about 5 acres.

Lewis Lake:

Motorists left a camp fire at Lewis Lake August 1, which spread into the dead pine needles and was rapidly gaining headway when Ranger Custer of the Thumb Station arrived at the scene after receiving the report from a passing motorists. The fire burnt over about 10 square feet of ground.

Lone Star:

Temporary Park Ranger Fred C. Finch discovered a fire left by motorists above the Lone Star Geyser August 9th. The fire was not serious but was in a dangerous section.

Kepler Cascades:

Passing motorists reported a fire August 9th at Kepler Cascades. Ass't. Chief Ranger E. T. Scoyen, of the Upper Basin Ranger Station extinguished the fire after it had covered an area of twenty-five square feet.

Tower Falls:

A tourist at Camp Roosevelt was responsible for a fire near the Camp on August 12th. The fire was discovered in the heavy timber back of the tents occupied by the boys attending the Forestry School. Park Ranger Dupuis with the assistance of fourteen men succeeded in getting it under control after it had burnt off about five acres. Favorable conditions prevented a serious fire, the men being successful in cutting it off before it reached an exceedingly heavy timbered section.

Buffalo Farm:

Buffalo Herder Homer C. Fear, accidentally discovered a fire at the Lamar River Ford where motorists fishing in the district had left their camp fire, August 21st. The fire had spread into the tall grass and was rapidly spreading onto the hay meadows when it was discovered. The loss of the entire hay crop at the Buffalo Farm was averted by the timely action of Fear who extinguished the fire after it burnt off about fifty square feet of ground.

Bacon Bind:

Lightningstriking a tree on the Bacon Bind, August 27th, at Snow Slide Creek was responsible for a fire in one of the few remaining fur timbered districts in the Park. About twenty large trees burnt before the fire was checked. Davis was assisted by Prof. C. N. Arnett of Bozeman, Montana, who volunteered to accompany him to the fire. Mr. Arnett's service is highly commended by Davis.

(See Page 10)

Arrests

August 1.

Mr. E. S. Gardenhire, Ardmon, Oklahoma, was fined \$25.60 on the complaint of Ranger T. Cogswell for leaving a camp fire and a dirty camp at the Mammoth Auto Camp.

August 5.

Mr. E. P. White, Livingston, Montana, was fined for exceeding the speed limit on the complaint of Ranger Hollis Matthew. Fined \$25.00 and costs \$5.60.

August 6.

Mr. C. F. Pantte, Marion, Kansas, fined for leaving a camp fire at the Lake on complaint of Ranger Ed. Burkett. Fined \$20.60.

August 12.

Mr. Abraham Miller, New York City, fined for defacing the formation at Upper Basin on complaint of Ranger E. Robertson. Fined \$10.00 and costs \$5.50.

August 13.

Mr. Frnak J. White, Assistant Manager Lake Hotel, Yellowstone Park, Wyoming, charged by Ranger Pierce A. Cumings of illicit traffic of intoxicating liquor. Mr. White was tried before Judge John W. Meldrum and prosecuted by U. S. District Attorney Walton of Cheyenne. Fined \$150 and costs \$6.40.

August 13.

Mr. Thomas Dwyer, Head Porter, Lake Hotel, Yellowstone Park, Wyoming, charged by Ranger Pierce A. Cumings of violating the Volstead Act. Mr. Dwyer was tried before Judge John W. Meldrum and prosecuted by U. S. District Attorney Walton of Cheyenne. Fined \$150 and \$1.40 costs.

August 13.

Mr. Otto J. Breil, Porter Lake Hotel, Yellowstone Park, Wyoming, charged by Ranger Pierce A. Cumings of violating the Volstead Act by selling liquor. Mr. Breil was tried before Judge John W. Meldrum and prosecuted by U. S. District Attorney Walton of Cheyenne. Fined \$100.00 and \$1.40 costs.

August 13.

Mr. R. J. Wells, Chief Clerk, Lake Hotel, Yellowstone Park, Wyoming, charged by Ranger Pierce A. Cumings of violating the prohibition laws. Mr. Wells was tried before Judge John W. Meldrum and prosecuted by U. S.

District Attorney Walton of Cheyenne. Fined \$100.00 and \$1.40 costs.

August 13.

Mr. W. H. Gruenhagen, Bellboy, Lake Hotel, Yellowstone Park, Wyoming, charged by Ranger Pierce A. Cummings of violating the prohibition laws. Mr. Gruenhagen was tried before Judge John W. Meldrum and prosecuted by U. S. District Attorney Walton of Cheyenne. Fined \$100.00 and \$1.40 costs.

August 18.

Madam Josephine Mattson, Butte, Montana, charged by Emmett Matthew of defacing the formation, fined \$15.00 and \$5.60 costs.

August 19.

Mr. Chas. F. Marchison, Calgary, Al. Canada, fined for leaving fire on complaint of Ranger Earl D. Glynn, fined \$10.00 and \$5.50 costs.

August 20.

Mr. Lowell W. Ridges, Ogden, Utah, charged by Ranger Earl D. Glynn of exceeding the speed limit. Fined \$25.00 and \$5.60 costs.

August 29.

Mr. James W. Sullivan, Philadelphia, Pa., charged by Emmet Matthew of exceeding the speed limit, fined \$25.00.

August 30.

Mr. Ed. W. Fidler, Clarinda, Iowa, charged by Ranger Emmet S. Matthew of exceeding the speed limit. Fined \$15.00 and \$5.60 costs.

Reprimands

Temporary Park Rangers G. S. Ferguson and Chester L. Butler timed the car driven by Dr. Bennett from Madison Junction to the Fountain Ranger Station on August 2, 1921. He was taken into custody on a charge of exceeding the speed limit. The case was referred to Superintendent Albright who released the Doctor after giving him a reprimand.

Mr. Harry Thompson of Butte, Montana was instructed by Ranger Ed. Burkett of the Lake Station to report at the Chief Ranger's Office August 11, for exceeding the speed limit thru the Lake auto camp.

Telephone communication prevented action by the Commissioner, consequently, the defendant was released after being detained twenty-four hours at Headquarters.

Transportation Driver Anderson, No. 66, was taken into custody by Motorcycle Ranger Emmet S. Matthew for exceeding the speed limit. He was taken to the United States Commissioner who severely reprimanded the defendant August 11.

Motorcycle Ranger Hollis N. Matthew ordered W. R. Hoehner of Kemmerer, Wyo., to the Chief Ranger's Office August 14 for exceeding the speed limit of the Park across Swan Lake Flats. He was ordered to Park his car in front of the Information Office eighteen hours.

C. D. Swallow of Buhl, Idaho was taken into custody by Motorcycle Ranger Emmet Matthew on the complaint of the rangers at the Canyon Station August 13, who charged the defendant with leaving a burning fire. They suggested that he be reprimanded at the Chief Ranger's Office, detained and then released. The procedure was followed.

Mr. R. F. Stucky of Lexington Neb., was arrested August 16th by Motorcycle Ranger Emmet S. Matthew on complaint of the Rangers at the Fountain Station, who charged the defendant with leaving his camp fire burning. He was ordered to the Chief Ranger's Office at once where he was detained twenty-four hours and released after a reprimand had been given by Ranger W. M. Bishop.

Elmer Cain, of St. Paul, Minn., was arrested August 18, by Temporary Ranger Kenneth W. Krippene on a charge of defacing the formation on Jupiter Terrace. The defendant was a minor, with limited intellect, hence, Ass't Superintendent Lindsley reprimanded him and ordered him out of the Park.

Deaths and Accidents

Mr. Frank E. Baldwin, Custer, South Dakota, died of heart failure August 8, on the lawn near the Information Office. Mr. Baldwin was not effected with this ailment prior to the time he came to the Park. The deceased was accompanied by his wife, three small children and W. J. Baldwin and family.

All possible assistance was given the family and relatives while they were at Headquarters awaiting disposition of the body. Low finances made their position quite embarrassing.

Accidents

Motorcycle Ranger Russell Sprinkel sustained a severely sprained ankle, many concussions and abrasions and a laceration across the nose when he, on his motorcycle, collided with a Yellowstone Park Transportation Company's Special car driven by Roy H. Archer, August 6th, on the road from Norris to Mammoth. The accident was pronounced unavoidable by the officials investigating.

It is understood that some effort will be made by the Transportation Co., to reimburse Sprinkel for the loss of time and expense encountered as a result of the accident.

(a) A truck in the Salt Lake City Boy Scout Caravan, with six occupants turned over and rolled about 25 feet down a bank on the Dunraven Pass road on the afternoon of August 11. Two of the boys on the truck sustained minor injuries, which were treated at the Tower Falls Ranger Station by physicians with the party.

b Sanitary Engineer Arthur P. Miller, driving a light Ford Government Truck slid off the road between Mammoth and Norris at the nine mile post on August 11. The truck fell over, pinning Miller under the top. He suffered a broken rib, numerous lacerations and contusions, which confined him to his bed for several weeks.

c Mr. William Ladgies, of Alberta, Montana, sustained a broken ankle, fractured hip and numerous lacerations when the car in which she was riding fell twenty five feet into the Yellowstone River four miles south of Canyon Junction. The accident occurred August 27th when the car driven by P. M. Barbe of Billings Montana went to pass the car driven by Mr. Ladgies. The investigation showed that Mr. Ladgies threw the front wheel of his car into the rear wheel of the car driven by Mr. Barbe, which threw the car out of control.

d ^{near} A colt owned by one of the men working with a road Platts crew at the West Thumb, jumped into one of the hot springs where it met its death almost instantly. According to Ranger Custer who reported the accident August 14th, the animal disappeared, & no sign of its remains have been seen.

Natural Phenomina

Possibly the greatest event of the month was the eruption of the Fountain Geyser, August 15th, which had not played since October 1920. Ranger Troutman, who witnessed the eruption estimated that the geyser played to a height of 250 feet and did not fall below 200 feet during the one hour and ten minutes of its activity. No other action was noted during the remainder of the month. About two hundred tourists witnessed the eruption.

Change of Policy

The following circular was issued by Superintendent Albright to all rangers in the Park:

August 18, 1921.

Memo to Temporary and Permanent Park Rangers:

For our information and in preparation of any emergency, I desire that the following instructions shall be strictly observed by the men of the Ranger Service.

"Rangers shall not leave their station or district without first informing the Chief Ranger's Office of such a move, where permission will either be granted or denied, according to the conditions of the request. In the case of a man under a station chief, his permission must be secured before the request is made at the Chief Ranger's Office."

This order will take effect upon receipt of this memorandum.

----- James McBride
Chief Ranger